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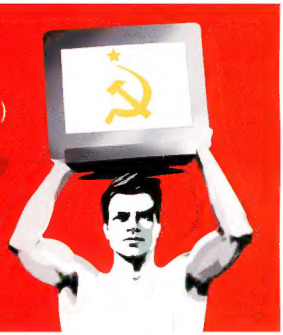
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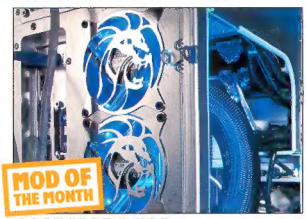
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3D cards are rivalling reality (p.28)

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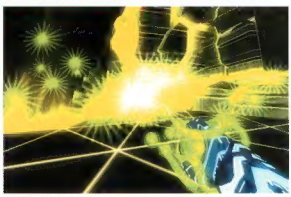
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DEMONSTAR
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DON'T BE FOOLED by the flattering photo, I'm hardly in the first flush of youth, but one advantage of greying temples is the ability to remember cool retro stuff the first time round. The 1980s being a case in point. Ah, those halcyon days of shoulder-padded beats, pastel suits and poodle perms, captured perfectly by *GTA: Vice City* – the exclusive review of which we have on page 70. We're really chuffed to get first dibs at the finished code, so forget the previews and tittle-tattle, this is it. I'm not going to give Alec's review away so early, suffice to say this is the first real classic of 2003. It seems only appropriate that *Vice City*'s being advertised in my local multiplex: finally, here's a game as engrossing as a movie.

The whiff of *Vice City* may permeate this issue like Tommy Vercetti's cheap aftershave, but there's plenty more to seduce your senses. Whether you want to start a revolution with your PC, Bluetooth-enable your house or buy a new hard drive, we've got the skinny.

Watch out for an even grander performance next month, because it's issue 150. Shouldn't *PCFormat* be declared a living national treasure or something? Feel free to start a petition...

Geoff



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Next big thing

News/Comment/Profiles



>>BROADBAND

Fast net price row

In the DSL desert, is BT offering an online oasis or Midband mirage?

Image: BT

WHEN IS A PRICE CUT not a price cut? When it's accompanied by a hidden price hike. BT's latest ADSL price cuts could make broadband more expensive, and ISPs are angry.

On the face of it, BT's move is good news. From 1 May, the cost to ISPs for each ADSL connection fell by £1.75 per month for home users, and services for small business ISPs were "slashed by over 50 per cent". According to BT boss Ben Verwaayen, the cuts "benefit everyone from service providers to consumers and businesses, and ensure that the UK continues to have some of the lowest prices in Europe".

What BT did not mention is that while the firm is cutting its wholesale prices, it's raising its connection charges – which means that the total bill paid by ISPs will increase over the first year. As Jonathan Lambeth, Head of Corporate Media Relations with AOL UK, explains: "Last week BT dropped the monthly charges but they also put £25 back on the activation fee (to £50) they charge ISPs for every new customer – our costs for a new customer have actually increased." Although AOL – like other ISPs – doesn't intend to pass on the price hike to its customers, BT's announcement has left ISPs in a bizarre situation where their customers expect cuts but the ISPs' costs have increased.

> **"BT is seeking to crush its DSL competition." Richard Greco, Bulldog Communications**

Broader band

"In the long term any price cut is clearly welcome," says Lambeth. "Our concern is that BT implied we were getting immediate cost savings we could pass on to customers." ISPs' real beef is that BT has announced huge price cuts for business ADSL – but not ADSL provided by local loop unbundling. Thus (owner of Demon Internet) and Bulldog Communications have complained to telecoms watchdog OFTEL, and Bulldog's submission pulls no punches – according to boss Richard Greco, "BT is seeking to crush its DSL competition." BT's price cuts may have angered ISPs, but some of the firm's plans sound good news for net users. If you're stuck in a broadband desert, BT has found ways to make ADSL reach further, to 6km from the local exchange. The company believes that this means 600,000 additional households will be able to get ADSL. It has also found a way around the problem where people with fibre-optic lines couldn't get broadband.

BT isn't the only firm with cheery news about broadband, though – flushed with the success of its 1Mb service, Telewest/Blueyonder is gearing up for the launch of a 2Mb broadband service. It's miles ahead of BT, whose own 1Mb home service isn't due to launch until the autumn.

Of course, some parts of the UK still can't get broadband, or at least not in the immediate future. But BT has an answer for that too: Midband. BT's Midband service is due to launch in the summer, and delivers high-speed access to people who can't get ADSL or cable service. It's based on ISDN, a relatively old digital technology that's available to 97 per cent of the population.

BT's HomeHighway is the best-known ISDN service, and uses two digital phone lines to provide fast net access. Each line runs at 64Kbps, and they can be combined to deliver 128Kbps access.

>>FAMOUS FIVE

From family-friendly portals to super-fast 1Mb connections, these five ISPs offer all sorts of broadband services to suit all sorts of budgets.

PIPEX



Although Pipex is often seen as a business ISP, its services for home users are cheap and reliable – but the ordering process can be confusing. Not bad value, although the installation charge is pricey compared to other ISPs.
www.pipex.com
Best package: Xtreme Solo 2go
Price: £23.44/month (modem £63.95)
Bandwidth: 500Kbps

NTL



The firm has some unusual options to choose from: a cheap and cheerful 128K broadband for occasional users, broadband for Xbox owners, and an alternative to 500K services: 600Kbps for the same price.
www.ntlworld.com
Best package: NTLworld 600K
Price: £24.99 per month (free installation)
Bandwidth: 600Kbps

BLUEYONDER



Telewest is determined to outgun BT at every opportunity, and its 1Mbps service is only slightly more expensive than BT's 500Kbps, and phone customers get a fiver off. Installation is cheap and includes the necessary hardware.
www.blueyonder.co.uk
Best package: 1Mb Broadband
Price: £35.99 for phone customers: £39.99 (installation £50-£75)
Bandwidth: 1Mbps

HOT SPOTS>>
Must-see websites



ALEC'S CHOICE
www.showanellmusic.com
A gallery of homemade music of a heavy Christian bent. Download the MP3 by Lil' Markie to hear the most disturbing song ever!



DAN'S CHOICE
http://charybdis24601.blogspot.com
You pathetic creatures of meat and bone out there, quail in horror at *System Shock*: the sitcom.



ADAM'S CHOICE
www.separate-ways.de/kate/
A Kate Bush fansite. In German. A language he doesn't speak. Meet PCFormat's Alan Partridge.

Now you can have superfast internet wherever you live. Apparently.



Incoming

More chrome than a

Pentax Optio S
£349.99 www.pentax.co.uk



The only problem we foresee with Pentax's Optio S is losing it down the sides of sofas. Billed as smaller than a standard deck of playing cards, its 3.1-megapixel resolution may not be high enough to please the photographic purist, but will surely suffice for the rest of us.

XS-iV Multimedia Speaker
119 euros www.tdk-europe.com



So flat as to be nearly two dimensional, we're assured that the 80W TDK XS-iV speakers are uncompromising when it comes to sound quality. Using something known as SurfaceSound technology, they pack a sonic punch that belies their size. And we love the cylindrical sub, too.

TECO RPL1000
£TBC www.relisys.co.uk

There's nothing like playing Unreal Tournament on a six-feet tall screen, or creating your own home cinema with a digital projector. TECO's latest micro portable projector (it's only 2.7kg) is designed for business presentations, but its short-throw lens makes it perfect for home entertainment.

Wireless Optical Desktop Ice White
£89 www.microsoft.com/uk/hardware

Forgive us for getting excited over a keyboard and mouse combo, but this special edition of Microsoft's wireless desktop kit is something special. Styled in the kind of clean, semi-translucent white and silver look favoured by a certain fruity rival, it's a shiny delight for a wireless lounge setup or aspiring office environs. A little pretentious, perhaps, but very nice all the same.

Combo Special Edition
£TBC www.wdc.com



So you've been reading *PCF*'s Hardcore section for a couple of months, and you've realised that the thing you can't mod, light or immerse in water is a hard drive. So, how do you make it stand out? Simple. You invest in one of these external drives from Western Digital. As fast as it is garish, it's the perfect complement to a modded PC. Sadly not available in Europe.

However, HomeHighway is pricey: rental starts at around £25, and twin-channel access means two lots of phone charges.

Midband was meant to be different. It was to be unmetered for starters, which meant a monthly bill with no scary call charges; and it was meant to be capped, which meant you couldn't use it 24 hours a day. BT promised always-on email, which meant Midband would use a third ISDN channel, known as the D-channel, to provide a permanent 16Kbps connection. When you needed anything faster, for example to browse the web, the two 64Kbps channels would spring into action to deliver true 128Kbps access.

At least, that was the plan: the first signs of problems came with BT being unable to persuade the always-on email connection to behave due to "technical challenges along the way." As we went to press, *The Register* claimed that the new price could be as much as £35 a month, and the monthly limit might be 150 hours – with the fast connection counting for double, meaning as little as two and a half hours a day on the faster line.

Midband isn't the only trick BT has up its sleeve. The firm has been trialling a service called Exchange Activate or Community Broadband, which will go nationwide in July. Under the scheme, sponsors such as local development agencies or councils help to subsidise the cost of upgrading exchanges to ADSL. BT hopes that the scheme will help fill the gaps in coverage, that mean many rural areas can't get broadband. **PCF**

WE SAY...

BT still hadn't confirmed Midband prices when we went to press. Certainly, any move to bring broadband to areas lacking it, has to be a good thing. But Midband at £35 a month is costly; more than a DSL business package from Pipex. BT will say they need a return on their investment; we say charging a premium price for ISDN-based technology is punitive, as it's been around for years. Let's hope the real prices for Midband are lower, so it can be the hi-tech lifeline rural areas have been waiting for.

WHAT DO YOU THINK?

Head over to http://forum.pcformat.co.uk to have your say.

BT OPENWORLD

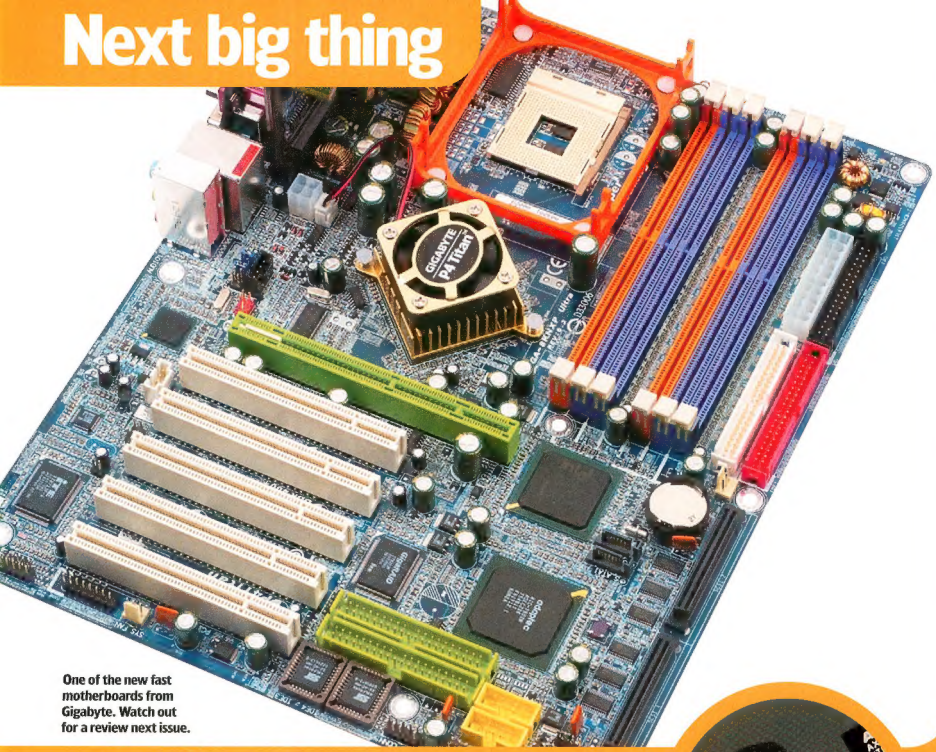


BT's own ISP does better at broadband than dialup, and BT subscribers seem happy enough. However, despite recent special offers, the company's Home 500 service still costs more than most.
www.btopenworld.com
Best package: Home 500 Plug & Go
Price: £29.99 per month (modem £50)
Bandwidth: 500Kbps

AOL



Power users can scoff, but AOL's service brings the company's user-friendliness to broadband with good results. The service is reasonable, includes cheap ADSL modems and provides access to AOL's proprietary content.
www.aol.co.uk
Best package: AOL Broadband
Price: £27.99 per month (modem £25)
Bandwidth: 500Kbps

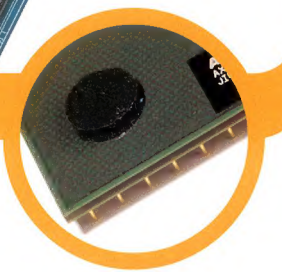


One of the new fast motherboards from Gigabyte. Watch out for a review next issue.

Reality check

Faster PC buses

Motherboards and chips get faster... again.



IT COULD SEEM like a case of keeping-up-with-the-Joneses, but we're sure it's just a coincidence that both AMD and Intel have just announced an increase in the front side bus (FSB) speed of their processors and chipsets.

The FSB speed dictates the rate at which information is transferred between the CPU and the rest of the PC, so it's vital to overall system performance.

Intel's latest chipsets, codenamed Canterwood and Springdale, are updates to the Pentium 4 platform which see a massive rise in FSB from 566MHz to 800MHz, and both should be on sale by the time you read this. There are rumours that AMD will be stepping its 333Mhz FSB Athlon to 400MHz later in the summer to compete, but this remains unconfirmed by the company.

Springing into a canter

Officially, Canterwood and Springdale will be known respectively as the 875 and 865 chipsets. Both will support dual-channel DDR400, serial ATA, AGP 8X and Hyperthreading Technology. And to support the new chipsets, revised versions of the P4 chips at 2.4, 2.6, 2.8 and 3GHz supporting the higher FSB will be released. Springdale will come in a variety of flavours for integrated or separate graphics options.

Canterwood features everything that Springdale has plus a little bit more – it's reckoned to be around 40 per cent faster than the current 845PE chipset. The key new feature in Canterwood is called Intel Performance Acceleration Technology, or PAT. Yes, postman jokes are inevitable, but PAT seems to be an extension of the thinking behind last year's Hyperthreading – more of an efficiency-driven technology than an out-and-out speed burst. By using bypasses and optimised paths for transferring certain data from the system RAM, it can achieve a (theoretical) throughput of 6.4Gb/s. Tweaks to the manufacturing process and faster silicon should yield even more power.

"Intel's latest chipsets see a massive rise in FSB from 566MHz to 800MHz"

Over at AMD, however, things are pretty quiet – the Barton release was very successful and we weren't really expecting any major changes to the current Athlon until it was replaced by the 64-bit version in the autumn. But rumours on the internet, fuelled by confirmation from several motherboard and chipset manufacturers, suggest that the Athlon will also see an FSB rise – this time to 400MHz – probably within the next couple of months. Exactly how much of a increase there will be over the existing Barton chips hasn't been suggested yet.

Although it's still early days you can expect full reviews of all three systems next month in *PCFormat*.

www.intel.com
www.amd.com
PCF



An early version of *Longhorn*; Microsoft won't say how accurate this is

>>WINDOWS

THE SON OF XP

Sketchy details – and very dodgy leaked alpha copies – have begun to emerge about *Longhorn*, Microsoft's successor to Windows XP...

A NEW VERSION OF WINDOWS IS always big news, and *Longhorn* looks like it'll shake up our desktops much more than previous versions have. Two leaked and very wobbly alpha versions only hint at what's to come, but have nevertheless been snapped up by the warez community, which has even concocted various patches, performance tweaks and activation cracks for the OS we affectionately refer to as Son of XP. But considering we don't expect to see the final version until 2005, it's safe to say that whatever you might see in your dodgy download is a long, long way from what you'll get in the final version. "The next version of Windows will continue to deliver on the Windows vision of making personal computing more convenient, connected and simple. While Microsoft's development efforts are moving forward, it is too early to talk further about the upcoming OS in any detail," is all we could squeeze out of Microsoft spokesperson Mui Luc. *Longhorn*, by the way, is just a codename: we're betting they'll finally call it *Phallus XP*.

>>BLOWING YOUR LONGHORN

A few of *Longhorn*'s more interesting features



The sidebar

This feature is in the current alpha builds that are doing the bootleg rounds. It's mostly a set of quick links to frequently-used applications and documents. A large visual clock and an automated slideshow of your pictures folder lends some visual flair. Not a technical knock-out, but pretty useful all the same.

Palladium

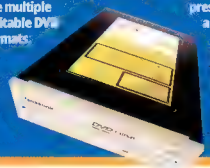
Otherwise known as 'The scary 1984 thing'. Whether it's good or bad depends on how deep your Microsoft paranoia is – it could be a major security and privacy-protection advance, or it could mean every action and document on your PC is tracked and file sharing becomes a thing of the past.

3D elements

Now that we're in an age where it's pretty much impossible to buy a PC without some sort of 3D graphical support, it makes sense to hear that the *Longhorn* user interface will include 3D elements. At this stage, it just enhances the look, rather than completely rethinking how we use the desktop.

DVD burning

One more in the eye for third party apps, then. Windows XP already supports CD burning straight out of the box – with *Longhorn*, you'll be able to master home video straight to DVD, hopefully for any one of the multiple writable DVD formats.



Avalon

We hoped that *Longhorn* might include an army of feisty, resurrected Arthurian knights so we were only slightly disappointed to discover that Avalon is actually a visual task-based reworking of the user interface, which may spell the end of ugly dialog boxes and their accursed kin.

WinFS

Arguably the most important development of the lot, the new Windows Future Storage filing system could completely change the way you use your PC. The location of files becomes irrelevant as the user is presented with something like a database search which concentrates more on subject matter than anything else. Essentially it will allow for complex searches, such as anything to do with email, rather than just an email.



Gill Bates

The word from the States

Bill Gates' secret sister writes exclusively for PCF

IN A COUNTRY THE SIZE OF THE US you'd expect the occasional misanthropist, but businessman Carl Fratzke, from Winona, Minnesota, takes the biscuit. He asked pals and colleagues to invest in a scheme to buy gloves and sell them to Wal-Mart. Having taken a cool quarter of a million bucks, he added half-million of his life-savings and pension, and sent the whole lot to Nigerian 419 con artists (so-called after the section of the penal code that deals with them) who promised him an even larger return. "They sent me a facsimile of the check they were going to send me," Fratzke testified. "They said, 'This is coming'." Now all he can look forward to is jail.

A 150-ACRE MOJAVE DESERT GHOST town located on Route 66 failed to sell after a month-long eBay auction. *Amboy*, in Minnesota, was founded in 1858 as a mining town and is currently owned by celebrity photographer Timothy White. Bidding on the auction site ended when no offers had reached the reserve price. The town, with seven residents, had a listed value of $1 million, but the top bid reached only $995,900. It has a post office, motel, gas station, church, gift shop, two landing strips and 548 acres of land.

IT MIGHT NOT BE ABLE TO FIND THEM, but the SETI project, based in Berkeley, California, may yet let the invaders in. A Dutch researcher has found that the now-defunct Extra-Terrestrial Detection system contains at least three security flaws that could let in those hairless horrors. The flaws are both on the server and the client side of the program. With Super-SETI arriving soon to replace SETI, the cancer project and the rest, hopefully those illegal aliens won't be able to get a foothold here.

IN SAN JOSÉ, CALIFORNIA, HABEAS IS suing bulk emailers, accusing them of using its poetry without permission, in an unusual use of trademark law to clamp down on spammers. Habeas' haikus are recognised by the antispam filters and technology of companies including Spam Assassin, AOL and Juno, and are used as a personalised version of a security tag. "The only reason to put our mark in the email is to make sure it gets past spam filters," said Anne P. Mitchell, a lawyer and spam activist, as she prepared to legally kick some spammer butt.

GILL BATES
pcfmail@futurenet.co.uk

WORD OF THE MONTH

SHELFWARE

A piece of software so fundamentally useless there's no way it's ever coming out of its shrink-wrapping.

3D CARDS

Cards keep on coming

nVIDIA announces powerful new graphics cards based on its NV35 chipset. Where will it end?



THESE DAYS WE don't expect components to have much of a shelf-life before they're superseded, but by any standard the graphics card market is moving *too* fast. With shortages on all the new product lines from ATI and nVIDIA, you'd think there'd be a pause for consolidation, if only to give people the chance to actually buy something.

But nVIDIA, possibly smarting from the GeForce FX 5800 Ultra's short-lived time at the top before ATI released the 9800 Pro, has told us that it's phasing out the whole 5800 range (based on its NV30 chip) in favour of three new high-performance cards based on its next chipset, the NV35.

The firm says it will begin shipping the NV35 by the time this magazine goes on sale. Names for the new cards are still unknown but the top two will probably be called the 5900 and the 5900 Ultra. While still large – the boards are roughly the length of the Voodoo 5 cards, require a separate power connector and take up the first PCI slot – nVIDIA says the new cooling solution is quieter than the case fans.

Although the new cards will use DDR rather than DDRII memory, the 5900 Ultra doubled the performance of the 5800 Ultra in shader tests, the result of the larger 256Mbit memory interface and GPU/memory clock speeds of 450/850MHz for the 5900 Ultra and 400/800MHz for its sibling. A third, mid-range card – pitched slightly higher than the current 5600 – will carry 128Mb DDR RAM, as will the 5900. All cards will boast CineFX 2 and Intellisample 2, tweaked versions of the NV30 engines.

We'll review the NV35 and talk to nVIDIA founder Jen-Hsun Huang next issue. We're aiming to look at review code for the first DirectX 9 games, too. **PCF**



There's a newer, better demo than Dawn, but NV wouldn't let us screenshot it

SOCIOLOGY

THE FAMILY THAT PLAYS TOGETHER...

If you don't have much money, you're more likely to play computer games. But why, dammit?



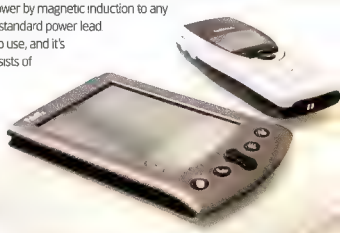
Low-income families play more computer games than their high-income counterparts, according to findings from US-based Jupiter Research (www.jup.com). The research revealed that if you earn under $35,000 you're likely to play 50 per cent more games than if you earn over $74,000. Less well reported was another conclusion: "Opportunities exist to improve reach to underexploited and ripe sub-segments: namely females and teens from low-income households." The keywords being 'exploit' and 'low-income'. Of course, there's a a cause and effect question here: do games' addictiveness make you impoverished, or does poverty create a desire for escapism? Or, are people unmotivated by money more inclined to like computer games? Looking at our recent readers' survey, *PCFormat* readers earn less than the national average for their age, but have a high proportion of disposable income...

TECHNOLOGY

PULLING THE PLUG ON POWER LEADS

A revolutionary power pad will allow you to charge your favourite PC gadgets without plugging them in.

SICK OF CARRYING AROUND LOADS OF POWER LEADS? Then this power pad could be the answer. The pad transfers power by magnetic induction to any number of devices, at the same rate as a standard power lead. There's no connection required, it's easy to use, and it's safer than traditional power cables. It consists of an element in the main device less than a millimetre thick and a pad to place the device on. Owing to the technology's extremely low cost, it could become as ubiquitous as the plug socket. Manufacturer Splashpower is in discussion with several producers of PocketPCs and PDAs to have the technology built into their products. We'll get samples in as soon as we can. **www.splashpower.com**



Could this pad be the end of the line for plugs?

Youre the jury

SUCCEED OR FAIL?



An industry bod pitches – you pass judgement. Toshiba's Midori Suzuki takes the wraps off AprilAlpha, a domestic robot that's hopefully more use than the comedy 'droid in the Fosters ad...



Toshiba has developed a home robot called AprilAlpha, designed to carry out tasks around the house. It can hold conversations with people, using voice-recognition and voice-syntnesis technologies, and has image recognition technology so it can recognise people whose features are recorded to its memory. An Open Robot Controller means that AprilAlpha can also be programmed to carry out new tasks.

Toshiba is developing AprilAlpha with the aim of achieving a 'life support partner' – a robot that can handle household chores and help care for the old or ill. Voice-recognition technology enables AprilAlpha to follow spoken instructions, while image-recognition technology allows it to recognise up to 100 individuals.

802.11b wireless LAN capability is integrated into AprilAlpha, and the robot can forward images from a built-in camera to mobile information terminals. Bluetooth allows it to communicate with – and control – networked home appliances via a Bluetooth-compliant home server. The robot can also be used for patrol: data on the layout of your house can be used to automatically create routes for it. Direct methanol fuel cells developed by Toshiba provide all-important backup power.

PCF When will AprilAlpha be commercially available in the UK?

Toshiba AprilAlpha is still a concept model, and we are continuing to develop it and monitor the market. We anticipate launching it in 2005. But we haven't set its price or a UK launch yet.

PCF How will it be able to care for the aged or ill – will it take care of their physical needs, or be programmed to dispense medicine to them?

Toshiba The robot doesn't provide for the physical needs of aged or ill persons. What we meant by support is that it can send and receive voice commands and send that command wirelessly to networked home appliances. This enables it to operate networked home appliances without physical movement. The robot recognises the owner's face and comes to the owner when they call.

PCF We understand it can carry out surveillance patrols – does this mean it can detect burglars? What does it do, arrest them or phone the police?

Toshiba It can move around the house and send images to 3G phones or PC through the internet, so that the users can find out what is happening in their homes. Users can tell the robot to call the police if it discovers burglars. The robot itself cannot arrest them – maybe in the future, though!

PCF Caring for the sick and detecting burglars... If this robot goes haywire or runs out of power, it could cause massive problems, couldn't it?

Toshiba As mentioned above, the robot cannot provide physical support for the aged, nor can it arrest burglars. It basically works as command receiver and transmitter.

>>YOUR VERDICT From the forums

iainjturner Potentially very useful if they can get it to do tasks people find boring, difficult or dangerous.

G3K Rather ambitious considering the technology available just now, but kudos to Toshiba for trying.

Clagg Will only appeal to the insane or rich. City types will have it dressed as a butler offering drinks and Ferrero Rochers! Cheaper to hire Daphne and Celeste to serve the plonk.

Masos007 It will be a cool gadget for people with more money than sense, and it sounds much better than Sony's crap dog. [the Aibo robot – Ed]

redaxe It won't be able to understand commands given in a different dialect to the original installation.

YOU SAY... FAIL!

For full interview and your responses visit www.pcformat.co.uk/succeed149

Diary

"June it may concern," Alec suggested, pre-beating...



GhostMaster

Empire Interactive gets in the spirit with this harum scarum hookum. As an afterlife civil servant sent to Gravenville by the Haunter Committee, you must frighten lowly mortals from their homes and places of work in a game that puts you in charge of legions of ghosts, ghouls and spirits.



Star Trek Elite Force II

Set in the Next Generation universe, *Star Trek Elite Force II* goes beyond Starfleet craft to explore alien worlds, zero-g environments and other not-so-hot spots reminiscent of the *PCF* office. The new armoury includes improved phasers, an enhanced I-Mod, Romulan disrupters and a tetryon Gatling gun. Which is nice.

MotoGP 2

Eagerly awaited release on the PC. Features realistic vehicle and rider dynamics; full season, single race and arcade modes with interactive tutorials; 10 real world tracks and more. Exclusive demo next issue.

Queen's Official Birthday

Gawd bless you, ma'am. The official site is at **www.royal.gov.uk**. Also see the net for an inexplicable tumult of queen and pope jokes.

PC Format

Issue 150 and all that – watch out for a bumper disc, E3 show report and some surprises.

GOOD MONTH

BPI The British Phonographic Industry, which gets fairly narked about illegal MP3 downloads, won its case against the Easy Internet Café empire. It raked in compensation of £210,000, wiping the smile off Stelios's face.

WINDOWS CE Thanks to the popularity of PDAs and smart phones, market researchers predict Windows CE will be outselling its desktop counterpart within five years.

BAD MONTH

NTL Advertising watchdogs have given NTL a right good wrist slapping for declaring its 128kbps service as 'broadband'. It was deemed misleading by Oftel, who demand its broadband to be 500kbps or more.

FRAUDS Masahiko Kajita's inventions took the Ig Nobel prize at the annual Robodex conference. His creations include fake laptops containing a whiteboard, and a palm-sized device that turns dog noises into English.

PCFormat Investigates

Games commentators

It's sheepskins and silencers as would-be Motsons report on online tournaments.

IT'S ONLY NATURAL that, with the growth of pro-gaming as a recognised and profitable sport, we should get proper games commentaries. This is where 4Kings Radio (**www.4k-radio.net**) comes in. Rising from the ashes of CS Radio, admins Oscar and Mashton are assisted by a team of DJs who give live, blow-by-blow commentaries of games tournaments. And they're a busy bunch.

"This weekend is Clikarena," Oscar told us. "So we will be commentating on a large number of the games over the entire duration." This is entirely with the organiser's consent, too. "They are fine about it, as I'm sure you can imagine – it gives their events massive publicity."

Relay race

Massive publicity? Isn't that something of an overstatement? Possibly, but although audience figures are unavailable, Oscar insists his listeners are spread far and wide. "On our main server we have 400 slots. We have relays to other servers and cybercafés but we can't judge capacity on those as we never know who's tuned in. We even have one to Russia, in a chain of cybercafes." With four months of growth behind 4K, its fanbase is still rising. "It can fill to capacity. When we commentated at 115 on the finals, we were jam-packed."

It's not all *Counter-Strike*, however, because the Shoutcast server broadcasts regular music, features, interviews and, as DJ r^eXile told us: "We want to expand our coverage to games like *Quake III* and *BF1942*, we've had one of the top guys from Codemasters in doing an interview about *IGI2*. One of our most popular stunts is prank calls to people in the industry." Which makes us rather worried that we gave them our contact number...

A different ball game

But is it really going to work? Listening to *Counter-Strike* commentary online and blind to the action is a strange experience. Our online games expert Jim Rossignol argues, "Football coverage on the radio is as abstract as coverage of *Counter-Strike* games, but I doubt games commentary and coverage will be huge until they hit TV and draw in large sums of cash." And maybe money is the deciding factor. "It's been a struggle," Mashton concedes. "Oscar and I have pumped so much money into it. We get the server paid for, but that's all so far." Pro-gaming may be growing, but it has a long way to go. **PCF**

"Listening to *Counter-Strike* commentary online and blind to the action is a strange experience"



"They think it's all over. It is now the last member of the team has been shot in the chest..."

>>THEY SAY

Commentary on carnage – flying high or shot down in flames?

OSCAR AND MASHTON

CO-OWNERS OF 4KINGS RADIO

"This is a good way for companies to gain massive publicity at little or no cost. I think this can benefit a lot of people: advertisers, developers, players or even just fans who can't connect to use spectator tools like *Half-Life* TV, tools yet to be built in to many games."



LUM

LASTCHANCE MANAGER, BARRYSWORLD CSL LEADERS

"I listen to 4K radio, and a lot of the DJs are great. I'm not sure about the legal side of Shoutcasts, but I think more ventures such as this to publicise internet gaming will definitely help the sport grow and come together over the next few years."



CHEEF

INDUCE CO-FOUNDER, Q3RA CLAN

"It just ain't the same. And what's the point? If someone makes a leet shot, I know it's a leet shot and I don't need someone telling me three minutes after it's happened. Commentary at LAN events is fine, but for games on the web? No."



SUJOY ROY

PRO-GAMER EXTRAORDINAIRE

"I do think that gaming can be a spectator sport one day. It's been proved in South Korea where there are pro leagues and the top gamers are celebrities. The difference is that they've got professional studios and a full-time staff – we're listening to a gamer broadcasting from his bedroom. If his mum says it's OK."



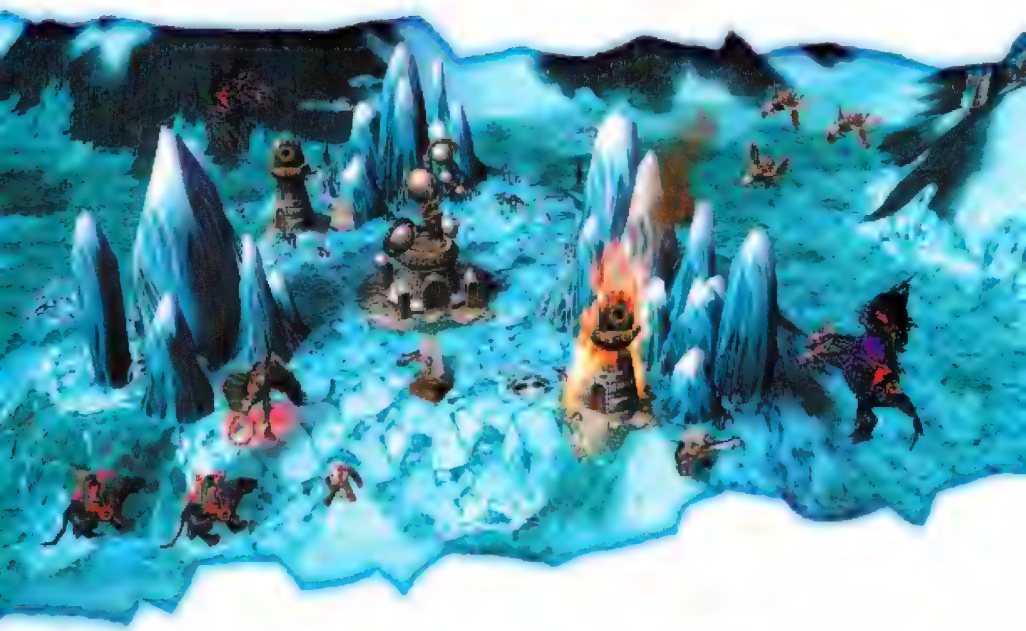
>>WE SAY

First impressions of 4K Radio's website are not fantastic. It's still to be finished and we spotted DJ comments about bad "skool" results and mums "not letting them carry on with it". Hardly a good reflection on the pro-gaming scene. While the determination and fan base is growing, this is soon going to be capped by bandwidth costs and a lack of sponsorship. We think 4K is on to a good thing, but lacks the money to make the most of it right now.



8 New Units · 9 New Heroes · 26 New Missions

Infinite Strategy





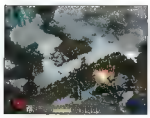
Expansion Set
4th July

BLIZZARD ENTERTAINMENT
blizzard.com

>> ONLINE GAMING

Heat on cheats

Cheating was rife on Battle.net – but was banning everyone the answer?



ANY CASUAL player browsing over to Blizzard's **Battle.net** servers was sure to get a shock. The players on the service were certainly skilled at *StarCraft*, *WarCraft* and the rest, but not as skilled as they seemed to be, relying instead on hacked versions of the game and deliberately unbalanced game mechanics. So it was no surprise when Blizzard finally acted against them.

What was surprising was the numbers banned: 131,000 *Diablo II* and 12,000 *WarCraft III* accounts, 7,000 CD keys suspended, and over 1,000 CD keys permanently banned. Blizzard said, "We regret having to employ these extreme measures, however, certain unscrupulous players have impaired the gameplay of the *WarCraft III* and *Diablo II* communities, and severe action continues to be warranted and required."

Interestingly, it wasn't the cheating (which is unavoidable on a small scale) but the Trojans contained inside some hacks that prompted Blizzard to ban the accounts. "The majority of hacks for *Diablo II* that we have seen do contain code designed to steal CD keys and account passwords," according to Blizzard's technical support department.

Unfortunately, Blizzard managed to ban all these accounts on April Fool's Day, the same time as an official PR stunt to alter all the players' forum icons into Lost Vikings, hence even legitimate players thought they couldn't access their accounts. The misunderstanding has since been cleared up, and the cheats now know who they are.

So what can you do to avoid being cheated of victory? First, it's worth remembering that key-remapping hacks (that is, programmed shortcuts) are not cheats – they may be recognised as such by the system if badly implemented but don't actually alter the game mechanics. If you suspect your **Battle.net** opponent is cheating (if you spot troops from high up the tech tree early in game, for example), don't go on the forums and complain; you'll probably get no action but more abuse. Instead, email hacks@blizzard.com – we've seen their QA department first hand, and they have no love for cheats of any sort.

www.battle.net



If you love your Orc, then take care; go onto Battle.net and you may lose him forever.

>> Operating Systems

LINUXBOX



The crafty little penguin poops on Microsoft again as hackers weasel Linux on to an unmodified Xbox.

The battle to liberate our processors from Bill Gates' hands is slowly being won, if only by hackers hungry for prize money. The challenge from Lindows founder Michael Robertson was to get Linux running on an unmodified Xbox for a share of $100,000. An individual known only as Habibi-Xbox will reportedly win it for finding a bug in the save handling of *007: Agent Under Fire*, which enabled him to save a copy of Linux to the hard drive and override the public key cryptography that had thwarted previous attempts. Linux geeks have snatched up the code and are now beavering away to produce an official release. The goal? To get us to chuck away our PCs in favour of a Linux-powered Xbox, further lining Microsoft's pockets but also offering Joe Public the possibility of a decently specced PC for just £160.



>> ARCADE

COIN-OPERATIVE

Namco acquires a licence to thrill the far East.



The two-player *CS Neo* is set to take off in Japan.

In an unusual move, Japanese arcade giant Namco is testing a simplified, arcade version of *Counter-Strike Neo*. The new version includes an introductory tutorial that Namco hopes will generate more interest in a global game that has yet to make it big in Japan. Basic *CS. Neo* is a two-on-two affair but it's hoped that Namco's new Ledzone facilities will allow for much bigger games, too.

Meanwhile following in the footsteps of *Counter-Strike*, the online mod *Day of Defeat* is set to get a retail release. Following the recent spate of World War II based First Person Shooters, such as *Battlefield 1942* and *Medal of Honour*, Valve has decided that the mod can make it as a standalone release.

And in the near distance, looms the best-kept secret of the games industry, *Half-Life 2*.

www.ledzone.com
http://csnation.counter-strike.net

Future shock



WATCH THIS SPACE

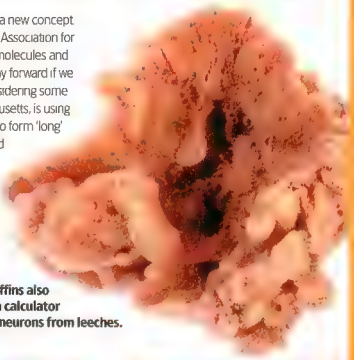
The future is here. **David Bradley** is in charge of catering.

Biological computers

Fact: cables can be grown from yeast, and solar panels can be built from sea sponges.

MACHINES MADE FROM LIVING TISSUE, or 'wetware', are not a new concept. But a recent conference of boffins and brainiacs at the American Association for the Advancement of Science confirmed our suspicions: organic molecules and chemical transmitters taken from living organisms are the only way forward if we want to shrink the size of our machines, and researchers are considering some unlikely sources. The Whitehead Institute in Cambridge, Massachusetts, is using common-or-garden yeast protein to produce wires, they stretch to form 'long' fibres (nanometres in length) but are robust enough to take a gold coating so they can conduct electricity. The plan is to genetically modify yeast cells so that we can literally grow ourselves some electrical circuits when we need them. Similarly, the BBC reports that the University of California has discovered that a titanium dioxide material excreted by sea sponges is great at converting the sun's light into energy. PCs made from these natural sources are decades away, but a tiny solar-powered device made entirely from lab-grown cells would be cheap and clean.

http://news.bbc.co.uk/1/hi/sci/tech/default.stm

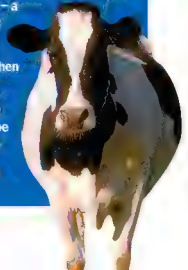


US boffins also built a calculator using neurons from leeches.

RISE OF THE ROBOT FARMERS

The institute which funded robot mushroom-pickers now plans to give almost 100 grand to an automated udder-sucker. Edinburgh-based IceRobotics will snaffle the grant from NESTA (the National Endowment for Science, Technology and the Arts) for inventing a computer-controlled 'elephant's trunk' tube, which mimics natural pulling movements. The robot can attach itself to a cow in the middle of the night – a natural time for calves to be milking – when it might be impractical or costly for humans to be up working.

www.icerobotics.co.uk





NO MORE FOOLS

Gene doctors could eradicate the world's idiots.

PUNDITS ARE QUESTIONING the ethics of genome research again, after biologist James Watson announced that stupidity is a fixable hereditary ailment. In March, Channel 4 screened a documentary called *DNA* in which Watson, one of the co-discoverers of DNA, claims that it's the duty of doctors to devise therapies for academic under-achievers. It's not clear whether he means to be taken seriously, because he's also claimed that it "would be great" if genetic research could engineer lots of pretty girls. Although the latter suggestion caused much sniggering, the question of intellect raises issues because conditions such as Fragile X syndrome, Down's syndrome and phenylketonuria genuinely have an effect on IQ. London geneticist Steve Jones told *New Scientist* magazine: "The IQ suggestion is a little bit less silly. The problem is where do we draw the line?"

www.newscientist.com



Margin of error

Tony Ellis is no armchair revolutionary. He has a sofa for that.

HELLO. I HOPE YOU ALL HAD as spiritual an Easter as I did. There's nothing quite like getting together with a few like-minded friends and neighbours to celebrate the true meaning of the season. The singing, the dancing, the screams drifting from the giant wicker man burning on the village green.

I recently reclaimed my old Future Publishing email address, deactivated the best part of two years ago. When I opened the inbox, it contained three guaranteed money-making schemes, a fake virus warning, and an email assuring me that young, open-minded oriental ladies were waiting to make my acquaintance. Spam. Fresh spam. I felt like Howard Carter, prising

"Young oriental ladies were waiting to make my acquaintance"

away the stones that sealed Tutankhamen's tomb, peering inside, and seeing a little man in there selling raffia camels. This was, to all intents and purposes, a new, pristine email address. What the blue, woad-painted arse were HOT! ASIAN!! TEENS!!! doing in there?



When I started receiving the latest editions of old email newsletters, ones I had subscribed to using this address some two years previously, I understood. We're taught that the best thing to do with spam is ignore it. You can even buy software that will bounce spam back to the sender as if your address didn't exist. Here's the thing: I don't think junk emailers care if your address bounces. They're just going to keep sending their stuff anyway, because it's easier.

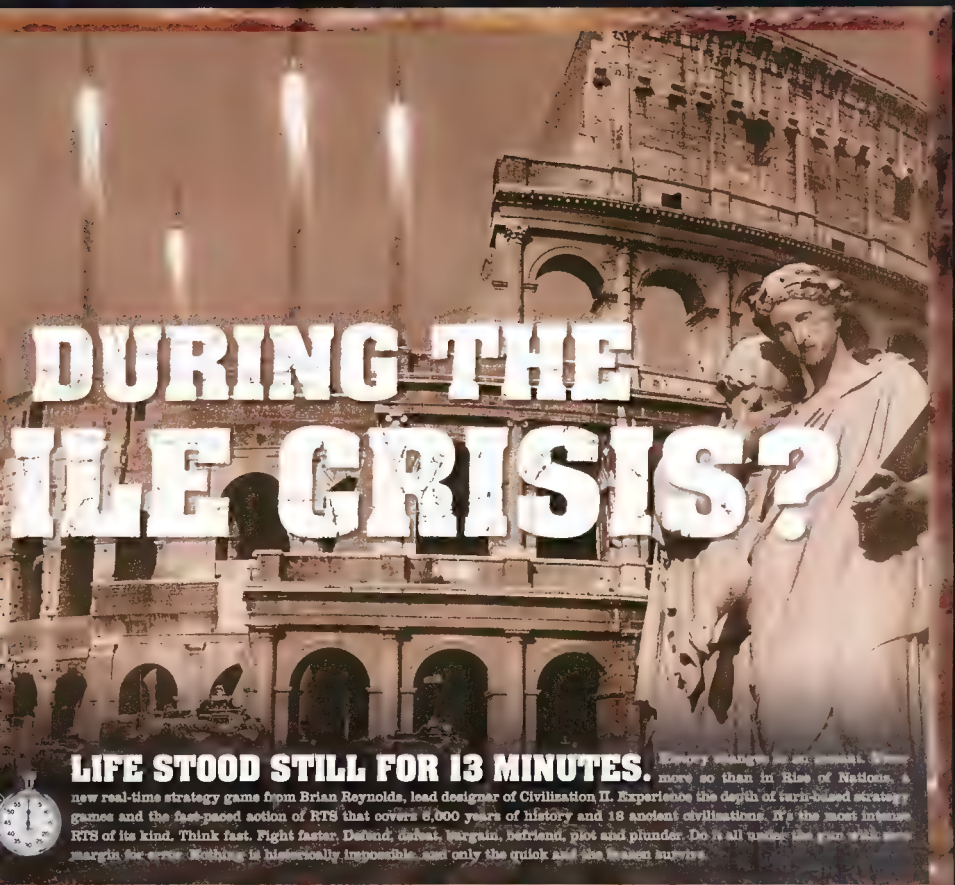
I don't know about you, but I have half a dozen email accounts that I've discarded over the years. Are they all being spammed, too? It's been estimated that spam accounts for 40 per cent of all email traffic. What percentage, then, consists of little 'address not found' messages being sent back to the spammers? Which they ignore.

The message is clear. Forget spam-blocking software. Draw up an accurate list of all the active email addresses in the world, and give it to the spammers. Let them send their drivel without all that wastage. The average speed of the internet will probably double overnight.

JOIN US ON THE FORUM!
http://forum.pcformat.co.uk



BIG HUGE GAMES
Microsoft game studios
POWERED BY gamespy



LIFE STOOD STILL FOR 13 MINUTES. [illegible] more so than in Rise of Nations, a new real-time strategy game from Brian Reynolds, lead designer of Civilization II. Experience the depth of turn-based strategy games and the fast-paced action of RTS that covers 6,000 years of history and 18 ancient civilizations. It's the most intense RTS of its kind. Think fast. Fight faster. Defend, defeat, bargain, befriend, plot and plunder. Do it all under the gun with zero margin for error. Nothing is historically impossible, and only the quick and the brazen survive.



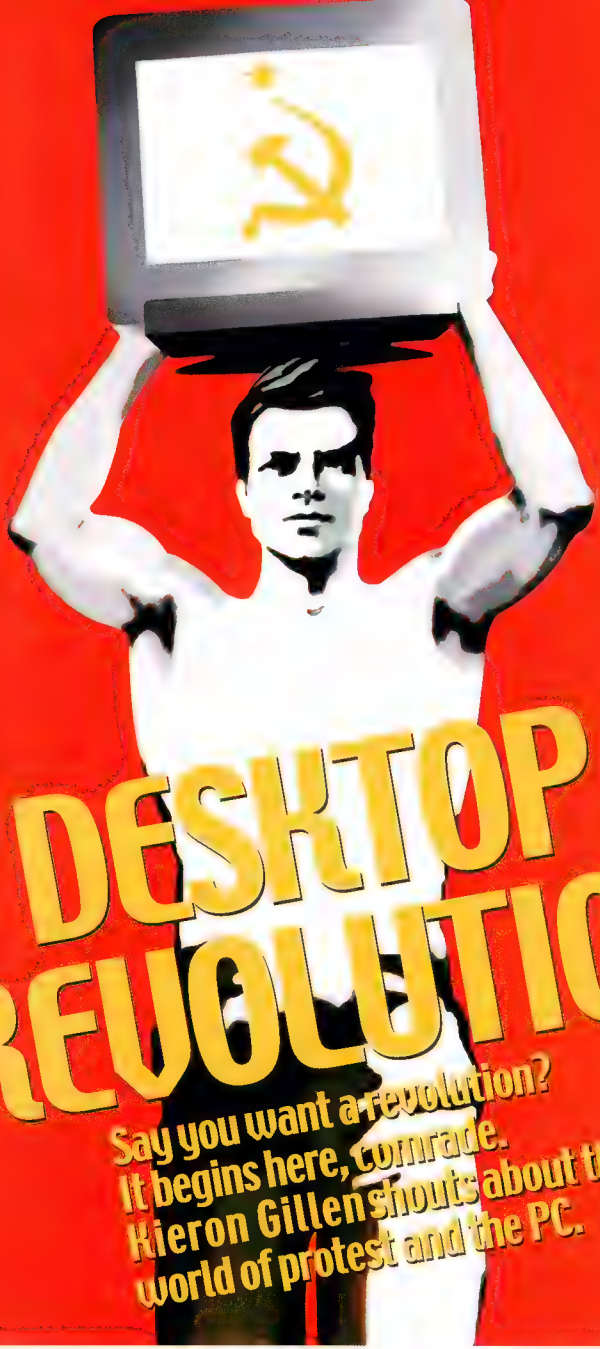


MAKE HISTORY

LAUNCHING 23rd MAY 2003

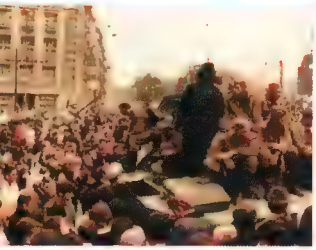
www.riseofnations.co.uk

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DESKTOP REVOLUTION

Say you want a revolution? It begins here, comrade. Kieron Gillen shouts about the world of protest and the PC.





Some People '68 in the Anti-Nazi war protests... There's always been dissent, but technology is making it easier to organise.

This magazine is, to a greater or lesser degree, devoted to the idea of change. Change your graphics card to get a slightly smoother frame rate. Change your BIOS settings. Change your word processing software to gain greater utility. In other words, either changing your PC to enable you to do things, or changing how you use your PC to do what you want to do. So why not try to expand that, and use your PC to change the world?

In the last decade, the internet and the availability of PCs has completely changed how activism has operated. From playful satirists performing elaborate cut-ups to expose the hypocrisies of politicians – or just to get a cheap gag from making Bush appear to have said how much he likes men's bottoms – to decentralised organisation of protest, to a modernisation of the ancient staple of the petition, the technology we love so much here at *PCFormat* has been used to devastating effect.

Make a stand

"There's a massive equalising effect. It's an enormous leveller," notes Michael Shamash, web team co-ordinator for Amnesty International. "Even if it's a small group of people, they can go out and do it and have a massive effect." Consider the effect that groups such as STAND (see boxout interview) have had. Alternatively, there's Amnesty's own Merton group, who in its protests against the planned stoning of Safiya, a young Nigerian woman accused of adultery, managed to gain 1.3 million signatures. Safiya was acquitted.

An email to Bush is unlikely to change his mind. 100,000,000, from US voters, might have an effect

Planning a campaign is of massive importance. Amnesty, having campaigned for years before new-fangled electro-video circuitry was invented, has gathered much of its advice in a manual (see the websites boxout). However, even with Amnesty's extensive experience, there's much to learn about the new world. "It's very rare for a government which caves under pressure to admit it caved under pressure and then to say exactly what caused it to change its mind," notes Shamash. "It's very difficult to have really, really solid empirical evidence. There are some things you can be very confident about. A single email to President Bush is very unlikely to change his mind. If he got 100,000,000, from US voters who included their ZIP codes to show they were a US resident, that might well have a effect."

Simple start

In terms of actually discovering what effect your own actions have on people passing through your site, it's considerably easier. Having your own website means you can track every mouse click and email from the page, gaining valuable information. "If every action you put up entails writing a very complex letter, CCed to different people, then you don't get many people on board," explains Shamash. "It might be worthwhile doing something that's very simple, which is unlikely to have a major impact, but your aim is to get more people interested, thinking about the topics, maybe looking at more information, to get more people to join and get involved in a more complex way ." A useful tool to get people involved in the simplest way is a petition. While the vast majority of petitions which clog up the internet are, useless, as part of a carefully thought out campaign they can be useful.

"With a petition, the person running the campaign has a really effective tool," notes Shamash. "If your petition has a tick-box for information, you can build up your subscriber database – that's one reason for doing it. But the real point with a petition is what you do with it and whether you get any media attention from the handover. For example, when the Merton group handed over its petition to the High Commissioner in London, it got in the press – and that kind of thing does get fed back to have an effect. It can be a reason for a demonstration. A picture of 100 people outside the Nigerian Embassy is not newsworthy – but if you have 100 people outside the Embassy with a 1.3 million-signature petition..." However, while direct mailing or contact makes sure a message is placed under the nose of who you're making your complaint to, it also gives them the power to ignore you, if they wish.

Subscribe and conquer

In terms of longer term techniques, Amnesty notes the success of building up a subscriber base. "We've kind of measured this. If we set something up on the homepage, we might get 15,000 people look at it in a day. We're unlikely to get more than 500 or so people taking action on it," Shamash explains. "In a lot of cases, it'll be 200 to 300 then declining. However, if I have a list of people who've signed up saying they're interested in that topic, and I send them a mail saying, 'This person's being tortured in country X: Please send this email to whoever' I can be confident in a massive increase in the number of people who will take that action. Within 24 hours, I'll be looking at 20 to 25% of the list."

Rather than just campaigning on a specific issue, there's also the ability to report your truth to the community. The spread of web technology has created a highly effective way to bypass the larger news vendors, with their compromised agendas, and speak directly to people. For example, **www.indymedia.org**, which sprung up in 1999 to disseminate coverage on the World Trade Organisation protests, lead to a decentralised network of other sites throughout the world, in every continent. With the ever growing bandwidth available to the modern PC user, the number of media available are far wider than text. With the camcorder boom, for example, video journalism is now an effective and highly powerful tool.

Undercurrent affairs

"Initial advice for those wishing to practise video journalism is to just do it!" says Helen Iles of **Undercurrents.org**'s training centre. "The first step is to recognise that your video camcorder is a tool for social change – by pointing it in the right direction you can tell stories that will make people think. Look around you. Get involved. The best stories are told from the inside. Make sure the people you want to film understand what you are doing and want to



MICAH WRIGHT

PCFormat probes the satirist's mind.

Micah Wright is an American writer who has produced a wide variety of altered propaganda posters for satirical purposes. Forty-five have been collected in the forthcoming book, *Back The Attack: Remixed War Propaganda*, with an introduction by Kurt Vonnegut.
www.micahwright.com



PCFormat: What power does satire hold in protest?
Micah: Satire just makes the stupid angry and entertains the intelligent. I can't count how many people I've had say "Damn right!" when they see my posters, not realising they're jokes. When someone points out the joke they react really violently.

PCF: Are you a propagandist or an anti-propagandist?
Micah: I think I'm a bit of both... I've got two themes at **www.antiwarposters.com**: fake posters from the administration and the Ministry of Homeland Security, and posters which express my true feelings and don't use false sincerity. I'm a third way propagandist, I suppose.

PCF: What do you use on the reworkings of posters?
Micah: Some of them are easily-done *Photoshop* jobs. Others are acrylic repaints with actual brushes and paints. Others are a combination. Either way, all text is done on the computer because I'm not insane... I know I can't letter anywhere near as well as a computer.

PCF: In terms of medium as well as form, your work with remixed propaganda wouldn't have immediately reached as far as it has without the internet. What do you think of the advantages and disadvantages of net technology for the political activist or satirist?
Micah: Well, my biggest disadvantages are limited access to people wealthy enough to have a computer, and I don't stamp my work with a watermark or **www.antiwarposters.com**, so I have the unfortunately all-too-commonplace occurrence of someone copying one of my posters and emailing it to a friend, but not bothering to tell the friend to go to the site to see the other 169 posters (and counting). This really limits my ability to reach new people.

PCF: Do you think there's a danger of your work preaching to the converted – or do you think that even if that's true, it doesn't matter?
Micah: Oh, I think the vast majority of people in this country have decided on one point of view and are incapable of changing it, both lefties and righties... I'm hoping to sway that 20 per cent in the middle who are still on the fence by pointing out things they might not have out together on their own. Like how we're declaring war on freedom in order to protect ourselves. A lot of people were so scared after 9/11 that they just willingly went along with anything. Now they're slowly waking up to the fact that they've buried themselves in lime and that their skin is starting to itch.



WARNING! EXPLICIT CONSUMERISM

One of Micah Wright's more well-known subvertising creations.

help. You want to tell their story, not just impose your own views." For those wanting to go further, **Undercurrents.org** has a training program.

The artistically minded might, however, think about subvertising. **Subvertise.org**'s Bill Posters explains the power of a good subvert: "Humour is always something that works well. The thing about subverts is that people don't have to be that political to enjoy them – and that's why people do them." A wide mandate generally gives the best results – don't just think of existent advertising. "You can take a company logo and change it, it's still a kind of subvert because the logo on its own is a kind of advert for the company," Posters explains. "The best are either really funny and you can identify what the original ad was, or just a subversive advert, not necessarily keyed to a specific company."

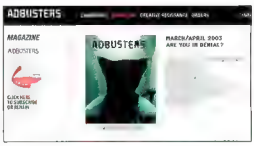
Altered images

Subvertise.org is a huge library of altered imagery suitable for all manner of causes, available for you to appropriate for your non-profit campaigns, using a database driven to automate as much of the process as possible. "Once it's been submitted to the site, we just have to look at it," Posters tells *PCF*. "If everything's fine, we hit a button on our admin interface and it goes straight into the site. The idea was to make it as easy and quick as possible to get the subverts up on to the site."

And the possibilities run on and on. From a campaign as worthy as Amnesty's or as frivolous as pressuring your fave TV show not to kill a character, the PC is opening up tremendous possibilities. Never forget the power that you have on your desktop. Change can be only a mouse-click away. **PCF**

PROTEST VOTE

A mob of sites to get you started.



ADBUSTERS
www.adbusters.org
American magazine of the world of adbusting.

PETITION ONLINE
www.petitiononline.com
Basic webhosting for petitions.

UNDERCURRENTS
www.undercurrents.org
Alternative news videos, training and a l manner of stuff.

CULTURE SHOP
www.cultureshop.org
Increasing availability of non-profit/independent media.

FAXYOURMP
www.faxyourmp.com
A highly effective way of contacting your MP.

AMNESTY INTERNATIONAL
www.amnesty.org
Note the fast action campaigns and general information.

SUBVERTISE
www.subvertise.org
Huge l brary of subvert material. Highly recommended.

STOP THE WAR COALITION
www.stopwar.org.uk
Centralised British anti-war protesting.

URBAN75
www.urban75.com
Alternative web news.

IMC
www.indymedia.org
And more alternative news.

MCSPOTLIGHT
www.mcspotlight.org
Everything about the McLibel case.

HACKTIVISM

Things can turn a little vindictive...

Hactivism is when you get nasty and attempt to ruin someone by defacing their web page. It's clearly arguable how effective such measures are – and because most of them are illegal, we're not interested in debating them. We like fighting the powers that be, but not that much. One thing's for sure – the number of these actions has increased massively since the beginning of the conflict. While both pro and anti-war sites are present, the weighting is far more towards anti-War Web security specialist F-Secure reported during the first week that, "Almost 10,000 defacements have been reported or confirmed during the past week and it is clear that the actual number is much higher."



Like spam, website defacement is here to stay.

HULK

UNLEASH THE FURY!

Following the events of the blockbuster Universal Pictures film, troubled scientist Dr. Bruce Banner and his alter ego, The Hulk, battle The Leader, a terrifying villain intent on unleashing a relentless army of gamma creatures.





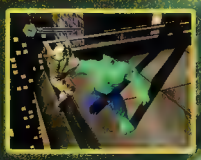
The Incredible Hulk also available on Game Boy Advance™



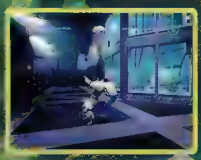
25 fully destructible and interactive environments. If you can't destroy it, you can smash it.



Battle notorious classic villains and massive new foes. Fight up to 10 enemies at once.



45 devastating attacks to dispose of your enemies.



Outsmart your enemies as you battle them using stealth and disguise.

PLAY THE GAME - SEE THE MOVIE

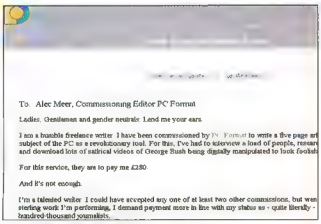
UNIVERSAL INTERACTIVE · MARVEL · UNIVERSAL · PlayStation 2 · PC CD · NINTENDO GAMECUBE · GAME BOY ADVANCE

DIY CAMPAIGNING

Our author goes online to get a pay rise.



01 **We're campaigning for a rise via Blogger: http://morecashforkieron.blogspot.com**


To: Alec Meer, Commissioning Editor PC Format

Ladies, Gentlemen and gender neutrals. Lend me your ears.

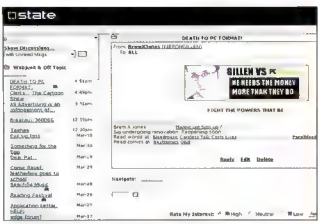
I am a humble freelance writer. I have been commissioned by PC Format to write a five page art subject of the PC as a revolutionary tool. For this, I've had to interview a load of people, researc and download lots of satirical videos of George Bush being digitally manipulated to look foolish

For this service, they are to pay me £280.

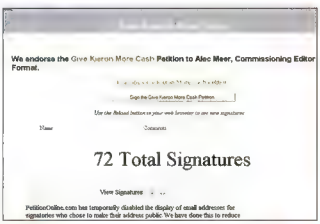
And it's not enough.

I'm a talented writer. I could have accepted my one of at least two other commissions, but was sterling work. I'm performing, I demand payment more in line with my status as - quite literally - hundred-thousand journalists.

02 **Next, we create an online petition. Equally, there's a banner for supporters' sites and Alec Meer's email address for harassment purposes.**



03 **Now, we spread the word. In this case, via the games forum, State (http://forum.extra-life.co.uk). Also via several blog chums.**



04 **A day later and success! Extrapolating from this encouraging result, the entire readership of *PCF* will have signed up by the time this reaches the shops!**

MAKING A STAND

STAND's Danny O'Brien on how to become the Mark Thomas of online protest...

STAND came together in 1998 in an attempt to fight against the excesses of the Regulation of Investigatory Powers (RIP) Act. After initial defeats, it launched its **www.faxyourmp.com** site in time to play a major role in stopping the RIP Act's extensions. **www.stand.org.uk**



PCFormat Had you been involved in any other kinds of protest before STAND?

Danny Me personally? I don't know – it all kind of blurs. When you're dealing with a medium like the web, there's less of a dividing line between expressing what you think, and achieving some success. A lot of STAND work has been fun in a prankstersh way – as when we managed to frame Jack Straw under his own proposed law (**www.stand.org.uk/dearjack/photostory.php3**). And Much of STAND has been saying what we thought, then leaping back when everyone added their own voice. I rather like that as a vision of how politics should be – an transition between deciding you don't like something, saying so in public, and doing something about it.

PCF In terms of the battle against the RIP, you've had setbacks. Care to talk about the highs and lows?

Danny I think a lot of people saw the introduction of the RIP bill as a defeat, but from the inside it didn't feel like that. I remember the proposals were genuinely terrible, and what people said – in writing to MPs, or forming marauding Slashdotty mobs – helped make better law. For matters like the reversal of the assumption of guilt under RIP, complaining did make a difference.

You have to be realistic: you look at these proposals, and you can see fracture points – areas where, with a bit of concentrated effort, you can crack it. We were never going to be able to stop the RIP bill just by getting people to fax their MPs. But it's amazing how much you can change it. Well, we were amazed anyway.

Perhaps we've got very low expectations, but we're always surprised that we achieve anything. Reading the fan mail that FaxYourMP gets, you can see that's true for many people who dip their toes into politics.

Similarly, with the RIP standing order – which provided surveillance powers to parish councils and the like – it was genuinely astounding how much the government reeled back from its original proposals.

PCF STAND's net presence has a playfully ironic tone balanced by a very clear layout. Is the tone deliberate? Why not be more po-faced?

Danny It came from the first campaigns, when we were inhaling masses of information, and then splurging it at each other to make sure we'd understood, then trying to lighten up so we didn't bore each other to death.

We're attention-deficit activists. I dedicate less than 0.01 per cent of my time to thinking about crypto and government surveillance and identity cards and nightmarish Orwellian dystopias. I think this is a good thing. If you don't get too eaten up by fear of the man, you can maintain a sense of perspective: you can realise that, OK, it's ridiculous to be *this* into crypto legislation, while at the same time be read-up enough to realise, no, this does have very great implications. It's conveying that this is serious. Not people-are-dying-in-the-streets-serious, but serious enough.

The irony is that the best way of conveying that level of importance is to be light-hearted about it. Maybe it's a British thing, but you know when people are making jokes about a topic, it's probably serious.

PCF FaxYourMP's a brilliant resource – mainly because it's a general tool for political action. However, isn't it somewhat telling that we have to fax a complaint to an MP to be taken seriously?

Danny MPs hold this weird position. They're theoretically the keystone of the constitution – the link between people and Crown. But we don't see them as that any more. The government just sees MPs as so much floating proto-ministerial fodder. And the people see them as guys who go "Hear, hear" and stick cheesy leaflets through your door. The constitutional theory is just seen as theory, replaced by a more cynical reality.

We started FaxYourMP by just taking constitutional theory at face value. If MPs were supposed to represent their constituents, wouldn't they be able to do their job better if their constituents could get in touch with them more easily? Wouldn't they like to do their job better?

We knew that MPs would never be in the position to go, "Stop all these faxes! I don't want to hear from my constituents! I just want to get a job at the Home Office!" We wanted to expose or fix corruption in the system, so we adopted a faux idealism about how parliament works, that politicians themselves have to give lip service to.

The weird thing is, it's not just lip service. Creaking and unoiled though the machinery is, it's still there, and it still inspires people.

PCF What's the biggest mistake you think you've made when starting a campaign? Do you think you could have foreseen it?

Danny Last year I made a commitment in front of a big crowd of people to do a daily-updated STAND site. It's just impossible – even if I had the time, eventually it would turn me into Just Another Obsessed Activist, and the world is full of those. In the end, I and the rest of us realised that we're better at these one-off projects.

And I think if I wasn't so sure of being shot down by someone cleverer than me, I'd hazard that at this stage, the net is better at these short-term projects, too. I'm not the first to notice that the smartmobbing strategies that STAND and other sites use are great for Slashdotting, but terrible at forming long-term, long-lasting projects, such as Amnesty International or the Conservative Party.

I don't have a solution to this, but I know a lot of people are, consciously or not, working on it. We get around it now at STAND by just hopping from one attention-deficit campaign to another. Others handle it by trying to form more stable communities. The MoveOn.org people are doing amazing things in the US right now with this, jumping from one campaign to another but somehow building momentum as they go.

PCF And what forms of computer tech related protest do you consider pointless and why?

Danny Petitions (nobody pays any attention), spam (10 thousand copies of an identical statement equals, in political terms, exactly one copy of the same thing), DOS attacks on websites (those ridiculous campaigns where you're supposed to visit some bad boy site and sit there hitting Reload.) Oh, and speaking personally, I really hate hoaxes and fake memes, even in a good cause.

ENTER THE MATRIX

ATARI

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Sound Blaster Audigy 2 blurs the line between gaming and reality. The unprecedented realism of 24-bit ADVANCED HD audio will immerse you in a world so real you will find it hard to leave.

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The PCFormat interview

SMART ALEKS

Aleks Krotoski was the loud American on late-night cult games show *BITS*, and partnered Iain Lee in *Thumb Bandits*. Now she's doing a PhD in the psychology of games and championing women in gaming, as Fiona Sibley discovers

PCF: On *BITS*, you were one of three girls presenting a show for mainly male gamers. Did you ever resent such a ploy?

Aleks: Not at all – the three of us played more games than the guys. *BITS* was so great because we wrote it ourselves each week and made it with a really small team. It was really long hours, having mental meetings and coming up with bonkers ideas, which was exhausting. We decided which games would go on the show and had pretty high expectations. I never felt like we were being used, even though *BITS* is such a gratuitous word, and we were three chicks being told to wear tight things.

Nothing has compared to it. Even though *Thumb Bandits* was broadcast at a good time, right after Graham Norton, Iain and I didn't have as much control, so it wasn't as exciting.

PCF: You left the girls behind to take on a male co-presenter, Iain Lee (of *C4's RISE*) – who was the better gamer?

Aleks: That depends! Iain's a real strat-head, and he loves beating me at *GoldenEye* which makes me very angry. We got the gig together because a friend told me he knew who I was. I was like, no way – that's that dude off the *11 O'Clock Show*! That was quite like the time Simon Pegg said his *Spaced* character's favourite show was *BITS*! That was so cool. The first time Iain and I met, we went and got wasted at the Trocadero, and I whipped his ass at *Time Crisis II* – I'm shit hot at it. *Halo*'s probably my best game.

PCF: Are you embarrassed that your old *BITS* co-presenter Emily Bouff is now taking the porn-star route to fame?

Aleks: No not at all! Her image is perfect for what she does and what she loves – she's doing programmes about cult movies. I think it's brilliant, she's made for it. She's been in TV longer than I have and knows what's involved. She's fantastic at what she does. Emily Dunn is still on TV, doing the Sci Fi Channel games programme. We were all so close on the show. I'm getting married this year – Emily Dunn is my maid of honour, and Bouff and Aldo (Palumbo, *BITS* producer) are coming down to the wedding.



"One girl was in a strong heterosexual relationship but went online and became a lesbian, using a roleplaying game to explore her personality..."

PCF: We hear you're swapping media punditry for the lofty heights of academia – a PhD in gaming psychology. What's that all about?

Aleks: There are so many people looking into gaming right now. What interests me is that I've always found gaming to be a really positive tool for learning how to solve problems. When you come up against a barrier, you have to think three-dimensionally to get past it. *Zelda* is so open – you can attack a problem in so many different ways. If you get through it with lateral thinking, and that angle is similar to something you're dealing with in the real world, then perhaps it can influence your real-life strategy.

You can't go into games thinking that they're going to change your personality but you can experiment outside of reality in social groups online. I know of one girl who was in a strong heterosexual relationship but went online and became a lesbian, using a roleplaying game to explore that aspect of her personality. Yes it's weird, but it's also exciting – like something out of a William Gibson novel. People are genuinely using online games as parallel worlds to try out these things.

I was fascinated by an article called *A Rape In Cyberspace* by Julian Dibbell. That really revolutionised my thinking about internet gaming. Three characters in a multi-user dungeon hijacked this woman's character and forced her to perform sexual acts. I thought this was an amazing social phenomenon. He wrote again more recently about how *EverQuest* is the 76th richest nation in the world [*according a recent study, players earn an average wage of $3.42 for every hour they play the game and collectively produce more than $5 million-worth of annual gross 'exports' – Ed*]. So these games are starting to pull in some really different angles of academic study.

PCF: Don't you worry about people getting a little too comfy in cyberspace?

Aleks: I'm aware that I have an addictive personality, so I have to stop myself! I was on Richard and Judy recently and some other guests were uncomfortable that I'd said, "Oh my God, I wouldn't play these games because they're so addictive. I know I'd end up falling in love with them and never leaving that world. " Some people in the industry are obsessed with the idea that games are not addictive and that there's nothing bad associated with them. That's not true.



"I never felt we were being used, even though we were three chicks being told to wear tight things..."

UPTOWN SMALLTOWN GIRL

As a feisty female in what some might class a boys' world, Aleks Krotoski has never been short of a few Tekken-style punches of her own making. Growing up in what she calls "Hicksville, Louisiana" – a town so memorable she can't remember its name – she was lured aged seven into the arcade next door to the laundrette. Her dad taught her to play *Pacman* and before long a gaming goddess was born. She may have been off our screens for a while, but few gamers have forgotten that crazy American girl off *BITS*, who always knew her arse from her elbow when it came to kick-ass games. The internet fan sites she attracted are still going strong. She's a self confessed Nintendo girl, but has recently become so enamoured with the snappily-titled Massively Multi-player Online Role Playing Games, such as *EverQuest*, that she's decided to write a PhD about them – if she can put down her game controls for long enough, that is.

PCF: What is it about gaming that turns you on? And are more girls getting in on it?
Alex: I really love the social aspect of playing with other people. Technology has got better and allowed for deeper games which I think women like better – they appreciate a story. How you can participate and put yourself into a character also really appeals to me. I've gender-bended, which isn't so common for women to do. Men gender-bend all the time because they think that women get more help and more weapons.

PCF: So the female of the species is more deadly than the male?
Alex: Exactly! I'm a Libra so I can't make decisions either. I like being different things each day.

PCF: Don't you find lands of swords and sorcery a little nerdy?
Alex: *EverQuest* is one of the best games in the world, and it's full of orcs and elves. Another game that's not out yet but I'm totally obsessed with is **www.there.com**. It uses the Sims format, so you get your character, dress it up and personalise it – you can even buy Nike and Levi's for it. It's going to be sold as a corporate tool, for people to hold global online conferences. But because you can level up if you've got so many *There* bucks, it's a still a game.

PCF: What's your favourite moment from *BITS*?
Alex: Once, we recreated our favourite shoot-'em-up moments. Bouff was Lara Croft, falling from a great height, spinning and screaming, and I got to shoot Emily with ketchup. Then I was lying on the ground as a Kingpin thug and the camera had a little plastic shotgun taped to the bottom of it. We rigged up something so my arm went flying off when it shot me – I was laughing so much but we could only film it once. The whole programme really cracked me up.

PCF: Still prepared to live and die by the games?
Alex: Absolutely. I can't wait to see what the next revolution of games will be – whether it's sound, processing or visuals. Will it be in 3D? Or, like David Cronenberg's *Existenz*, will the game enter through the base of my spine? Gaming is on a real plateau right now. Possibly taking graphics outside of the processor so that something this realistic is not taking up all the processing time would take things to an incredible new level. Then you could interact with the computer and the game much more. **PCF**

"What interests me is that I've always found gaming to be a really positive tool for learning how to solve problems. When you come up against a barrier, you have to think three-dimensionally to get past it."

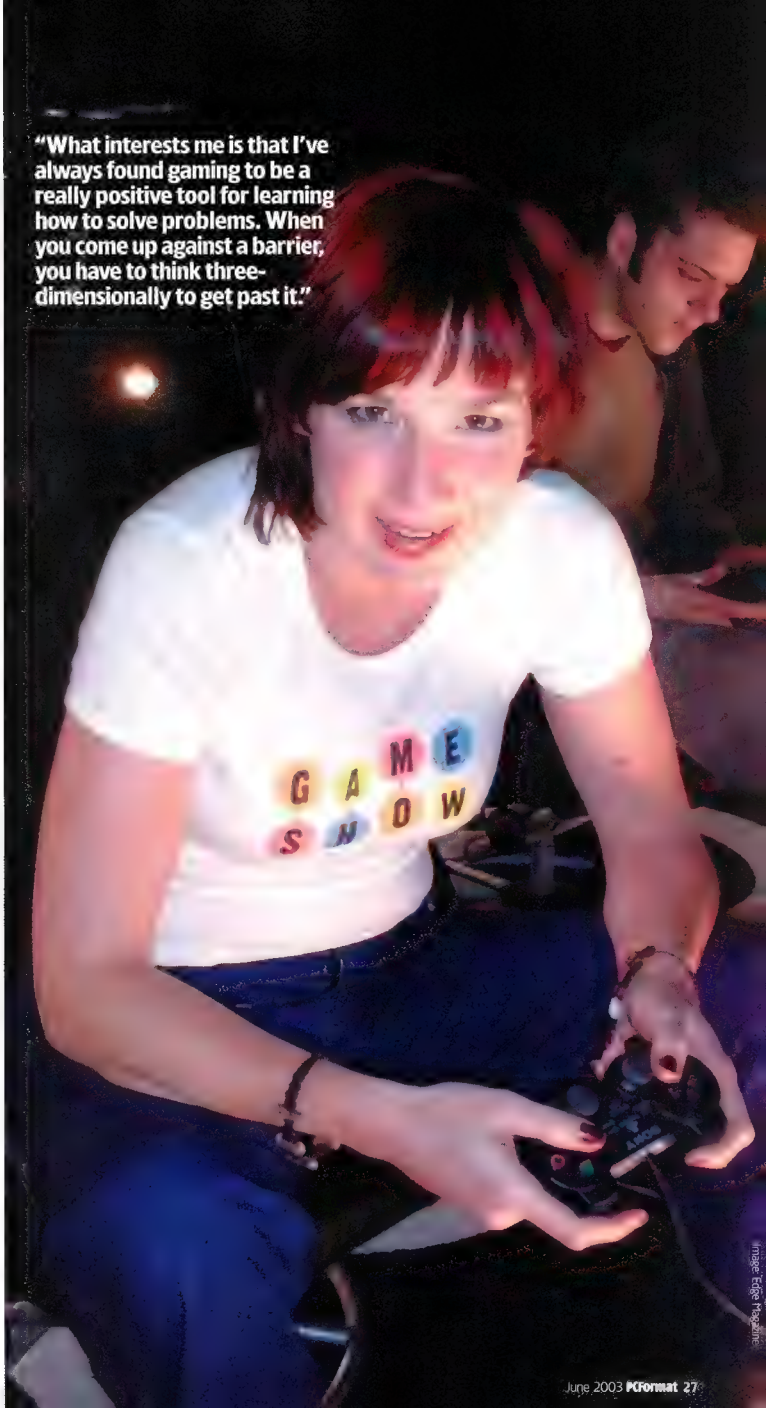


Image: Edge Magazine

HOW REALISTIC CAN GAMES GET?

From stark white vectors to sumptuously-textured polygons, game graphics are striving towards realism. **Ed Ricketts** enters the matrix and ponders, how real is real, anyway?

Anyone who's tried writing a novel can tell you that simulating reality is hard. Damn hard. Creating a virtual world with sufficient detail to fool a biased public is also intensely time-consuming.

Games have been doing this for years, but it's only recently that titles approaching the cliché 'photorealistic' have appeared, thanks largely to advancements in 3D accelerator technology. Every few months we're assaulted by a new chip, a new 3D engine or a new audio system that claims to mimic reality in such detail that you'll forget you're playing a game. Such claims are generally taken with a mine of salt, but as both game developers and hardware manufacturers advance in their art, it's hard to deny that virtual worlds are closer than ever. Interactive movies and mostly-pre-rendered environments have thankfully gone the way of the dodo, and now the emphasis is on creating a living, breathing world which looks and feels very familiar.

Scream play

Naturally, the mainstream media is concerned (usually for its own ends) on the effect such heightened realism may have. From *Night Trap* to *Grand Theft Auto III*, you can see the screaming headlines coming from a mile off – while the developers hope to hear the ching-ching of cash tills. Debates about sex and violence aside, how realistic can, and should, games become?

"That depends on the developer and the content that it is making," reckons Cliff Bleszinski, lead designer at Epic. "Let's take a game in which the environment looks perfectly real and the characters look real. Sounds fun, right? Then you design the game so that it allows your average user to bludgeon nuns with a baseball bat in perfect photorealistic glory."

Not far from *Postal 2*, actually (see the review on page 90). "I doubt the market would bear it," he continues. "There are certain experiences the majority of the public does not want. And what the public wants or deems acceptable drives the kinds of games they'll buy."

Adam Foat, nVIDIA's technical marketing manager for Northern Europe, is equally dubious. "I think we're a long way away from achieving the kind of realism that reflects the real world in such a way as to be convincing enough to make people truly uncomfortable," he says.

"However, as the technology evolves and graphics in games do become more realistic, the same laws that apply to films and animated movies will apply. I would hope that games containing particularly gory fight scenes or scenes of a disturbing nature would also carry the appropriate warnings and age ranges to ensure that anyone not supposed to play these titles doesn't."

Is this the real life?

Indeed, shock value through realism is usually a short-lived draw. Most people still play *GTA3* not to beat up prostitutes or run cops over, but to escape into a fast-paced fantasy world which is, crucially, fun. If the current crop of World War II games could actually depict the horrendous barbarism and suffering of that conflict in complete graphical detail, would you want to play them?

That innocuous little word 'fun' is the key point, and the simple truth is that realism doesn't usually equal fun. Like any other sort of entertainment media, games are supposed to be an escape from real life, like a compressed best-of, and including every single little



***GTA:* renowned for its shock value and shocking pink suits.**

THE DIFFERENCE A TOP CARD MAKES

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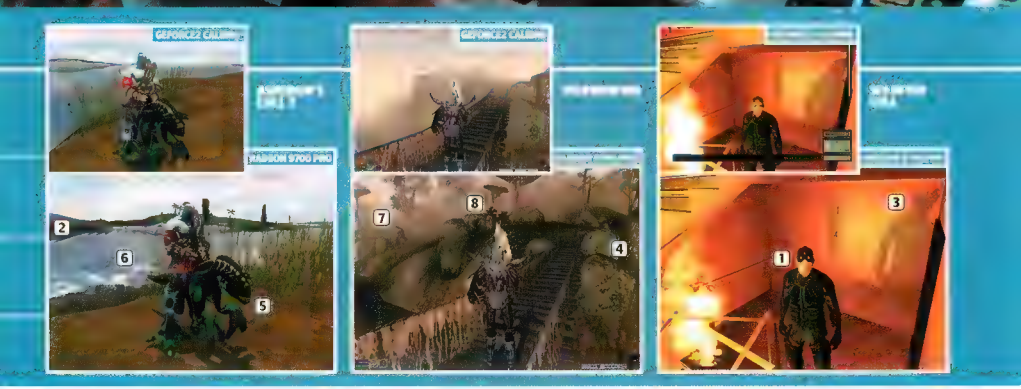
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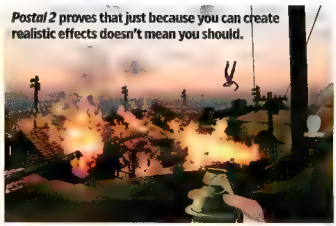
8

Doom III promises sublime levels of realism and a real test of your PC's hardware. When it arrives...





Pixel and vertex shaders are powerful tools – they create the real-time fur rendering in this ATI demo.



***Postal 2* proves that just because you can create realistic effects doesn't mean you should.**

detail that bogs down reality simply leads to tedium more often than not. *Trespasser* is the most notorious example. Not long after *Jurassic Park* reaped in millions for its impressive CGI stunts, Dreamworks Interactive decided to turn the film into a PC game that would do the same. It would push the boundaries of realism and flexibility, creating a world in which the player could do pretty much anything.

Control freak

Part of this realism involved the interface. Instead of the usual disembodied arm or weapon floating in the view which simply did things automatically, you had to control it manually, twisting, turning and pushing objects to manipulate them. Using a keypad involved aligning your finger precisely and pressing each key gingerly, while firing a gun was a whole performance in itself.

So proud were the developers of this giant leap in gaming that they littered the world with usable objects, all using a robust physics engine that simulated real life. You could fiddle with all manner of gadgets, and they'd all behave as you'd expect. Surprise surprise, all these exciting new developments turned out to be exceedingly dull. The so-called realistic interface actually comprised much of the gameplay itself – you'd spend hours just working out how to use something instead of having fun.

Trespasser is an extreme example of the follies of ultra-realism. Most developers know better. Imagine an RTS where you have to tell every unit to reload when it

>>The truth is that realism doesn't usually equal fun

runs out of ammo, or an FPS in which you can only run for a minute before having to pause for breath. Some games have tried such minutiae but all fail dismally.

Realism, then, is usually best achieved by ever more sophisticated visual and audio effects. Yet while each new generation of graphics chips promises unparalleled realism, most developers are still frustrated by the level of detail that can be displayed in an average game.

"Show me graphics that rival the real world and we'll talk then," says Epic's CliffyB. "Things will really get interesting in our business. What happens when you can render anything you imagine? Art direction and game design will matter much more than being the first developer to feature neat, rippling water in level three."

Generation game

Although gaming demands are driving the development of consumer hardware, it can't happen fast enough for the best developers. Caught in a constant upgrade cycle of new graphics cards and processors, John Q Gamer has to draw a line, so gaming technology is always a generation behind the capabilities of hardware. "The

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ATI's RenderMonkey is little use to you as a gamer, but it may help developers to create cool and exciting demos and screensavers.

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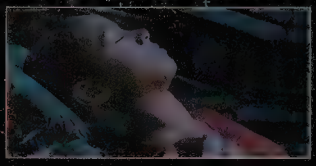


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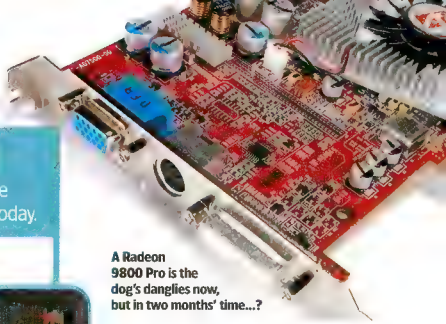
PC CD ROM

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(s03)

How realistic can games get?



A Radeon 9800 Pro is the dog's dangles now, but in two months' time...?

BRIEF HISTORY OF REALISM

Gaming realism has come a long way in the past 10 years, from the monochrome wireframes of pre-1992 to the polygon-shifters of today.



1992

ULTIMA UNDERWORLD (Origin)
Long before *Doom*, *Ultima Underworld* introduced true 360° movement, sloping walls and floors, and an incredibly immersive environment. It still wasn't really true 3D – characters were sprites, for example – but it was light years ahead of anything else.



1994

MAGIC CARPET (Bullfrog)
This rather underrated game featured an astonishingly advanced 3D engine for the time, with reflective water, deformable landscapes and full freedom.

DESCENT (3D Realms)
Like *Magic Carpet*, *Descent* from Epic MegaGames was a milestone in 3D, one of the first titles to give you the feeling of actually flying in 3D space.



GLINT 300SX (3dlabs)
The chip which claimed to be the very first 3D hardware-accelerated product for the PC. Needless to say, it was expensive and nothing supported it.



1997

QUAKE 2 (id software)
Not so much of a quantum leap, but the Q2 engine powered games for years afterwards – and indeed still does.

RIVA 128 (nVIDIA)
nVIDIA's first really significant effort at 3D. Almost as fast and with more features than a Voodoo, it quickly caught on.



1998

UNREAL (Epic MegaGames/ Digital Extremes)
After long delay, the much-hyped rival to *Quake* and *id* appeared – and it was good. With epic environments and cutting-edge visuals, this raised the bar once more.



HALF-LIFE (Valve)
Showed what the *Quake 2* engine could really do – with a few refinements of its own.

VOODOO 2 (3dfx)
It was back, this time with a card you could actually buy as a pair and link for even more speed. The crowd went wild.

2000

RADEON (ATI)
GEFORCE2 (nVIDIA)
ATI was catching up with nVIDIA, while the latter forged ahead with the ultra-programmable GeForce2.



QUAKE III ARENA (id Software)
Curved surfaces! The game itself had its critics, but once again John Carmack was aeons ahead of the competition when it came to technology.

2002



UNREAL TOURNAMENT 2003 (Epic Games)
Debuting the new *Unreal engine*, *UT2003* followed id's template of so-so gameplay with bleeding-edge visuals.

RADEON 9700 (ATI)
GEFORCE4 (nVIDIA)
Again.

1993



DOOM (id Software)
What's to say? Even if you didn't play it at the time, you'll know about the effect this had on 3D gaming – and indeed game development in general.

7TH GUEST (Trilobyte)
Virgin's seminal horror adventure/puzzle was probably the first major title to feature sumptuous pre-rendered environments. It ushered in realistic rendered 3D (and, indeed CD-ROM as a medium), paving the way for the likes of *Myst*.



1996



QUAKE (id software)
Much-hyped, much-discussed, much-loved. Characters and environments were in true 3D – maybe not for the first time, but the quality spoke for itself.

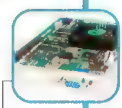


DUKE NUKEM 3D (3D Realms)
Quake's biggest rival, again from Epic, and featuring the briefly popular Build engine. Similar in capabilities to id's engine, it went the route of realism rather than fantasy.



TOMB RAIDER (Core Design)
With its enormous levels, buxom heroine and plentiful hype, *Tomb Raider* was a prime candidate for early 3D accelerators. It was this game that introduced many users to the wonders of 3D in hardware, and we could never look back.

VOODOO 1 (3dfx)
Seemingly from out of nowhere, 3dfx arrived to take the accelerator market by storm. Its Voodoo was fast, cheap, loved by developers and ruled the world in one form or another for the next few years – despite the fact that it couldn't do 2D.



VIRGE (S3)
3D RAGE (ATI)
VERITE1000 (Rendition)
APOCALYPSE 3D (VideoLogic)
Spurred on by gaming, 3D acceleration kicked off this year, with all these chips vying with the Voodoo for the hearts and minds of developers.

1999



TNT2 (nVIDIA)
GEFORCE256 (nVIDIA)
The year belonged to nVIDIA. The TNT2 was rapidly encroaching on the Voodoo 2's lead, while the GeForce256 was astonishingly good for the money.

2001



GEFORCE3 (nVIDIA)
RADEON 8500 (ATI)
We seem to have been here before.

2003



RADEON 9800 (ATI)
GEFORCEFX (nVIDIA)
DOOM III (id software)
...and again.

PC market – and PC developers – are often limited by keeping their games and technology backwards compatible with as many existing computers as they can," explains CliffyB. "That's to achieve the largest potential consumer base so they can sell as many copies of their games as possible. Some developers accept a trade-off so that, when it comes to making a game for high-end hardware, their title may encourage users to upgrade while their game remains cutting-edge, and thus sell for longer than lower-end titles."

Those same developers – id being most prominent – have the luxury of influencing the design of future chips, as nVIDIA's Adam Foat comments. "We took a lot of guidance from him [*John Carmack*] and other key developers on the creation of the NV3X platform."

Play to win

For many manufacturers, *Doom III* is a guaranteed source of income, boosting the sales of PCs and cards as many users upgrade simply to play the game. A killer app such as this can really showcase hardware's capabilities and sets the standard for other developers to beat, creating a win-win situation for everyone.

Microsoft's next version of Windows, codenamed Longhorn, might have an effect, too. There are rumours that it will contain game-specific improvements, perhaps

>>What we need is a real 3D display, not a flat screen

including the use of pixel and vertex shaders on the desktop itself. See our news story on page 11 for more.

Nils Horstbrink, ATI's product manager for Europe, believes that such capabilities are a defining feature of cinematic realism in games. "Longhorn will change the market for advanced graphics features, making them mainstream. At the moment I can't imagine seeing any DirectX 9 boards being used to the full .. Over the next year we'll see many games with DX9 features, and we've already shipped more than a million DX9 chips for the latest Radeon boards so there will be a market for them."

And while there are technical limitations, he says, to the size of future chips, there are other ways to improve realism. "Eventually we will hit the same barrier as CPUs, where they can't be made any smaller. At the moment we're on a 0.15 micron process, and our next chip will likely be 0.13 micron. But CPUs are already at 90nm and we have a while to go yet. What we need is a real 3D display, not a flat screen that simulates it. The specialist medical sector uses this sort of thing already, but even the cheapest is way out of reach of the consumer."

What's certain is that in the search for realism, with hardware manufacturers and game developers battling for supremacy, we can only benefit. As Horstbrink puts it, "I would say that nVIDIA is nothing without us and we're nothing without them. That competition is vital." **PCF**

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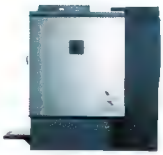
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PLUG IN & DROP OUT
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As the summer coughs into life like Geoff's Fiesta, our thoughts turn to the great outdoors, sunlight and fertile meadows, and how to project them all on the walls of our flat, with the blinds tightly shut. Moreover, while Ra is around and pushing down retail sales, why not get all your gadgets in on the cheap? Then when the winter months draw in, you'll have a perfect home hub ready and waiting.

With this in mind, John Skeoch shows you the best PC hub kit available, from Orbit's clever CD/DVD copier to a programmable remote. We also investigate surround sound, checking out the best speakers on the market.

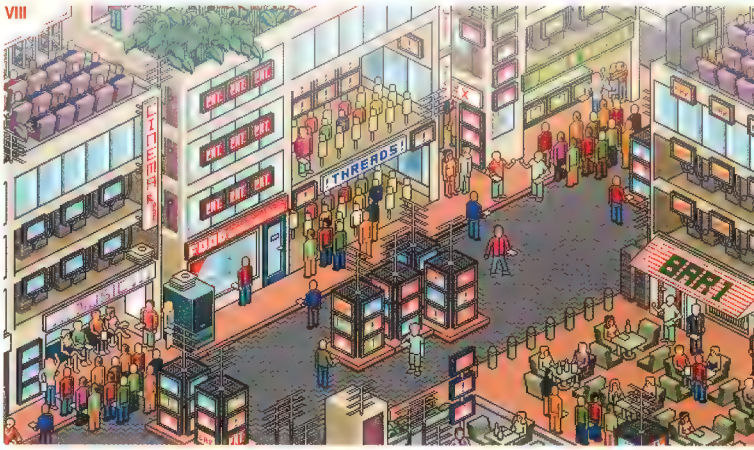
If you were wondering how to connect up your PC to your Xbox, you might be interested in our Xbox Live! wireless feature, Alec Meer invites you into his lovely home and shows you how to get your Xbox set up on your home network, how to get Xbox Live! running across it, and even how to get internet *Halo* working through your PC.

Talking of wireless, we also probe Personal Mobile Gateways; gizmos that communicate with other gadgets, and could in the future blurb your details to all, revealing what you like and what you don't, like a Philip K Dick wet dream. Are they much cop or could they tell the cops too much?

Then there's our regular DVD page, a tutorial on hooking up all your gadgets with Bluetooth, and some scrumptious shots of unobtainable gadgets. Cor, aren't we good to you?

Dan

VIII



IV



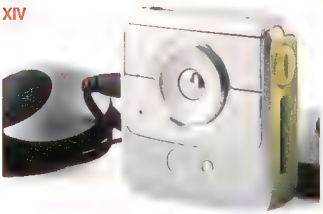
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BLUETOOTH
It's cheap, it's easy, and we show you how to bring it to your home. PXIV

Digital home desirables

Regrettably **John Skeoch** has more sense than money but hopes to revive his flagging coffers with some hot gadget tips.

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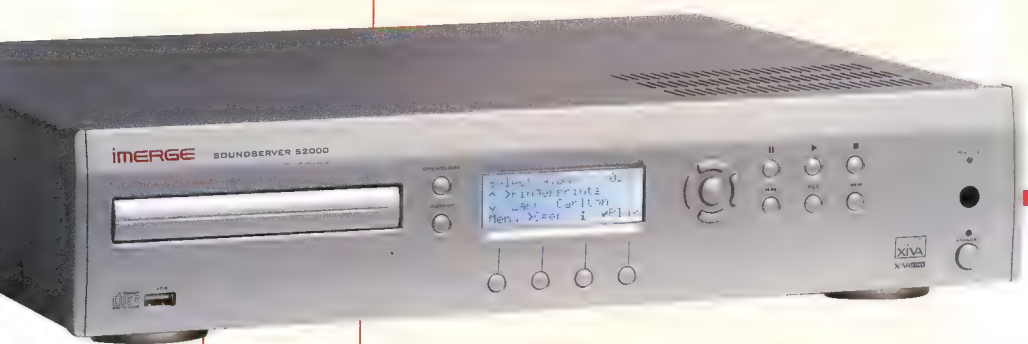
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For all you audiophiles, the S2000 gives you the option to leave the media uncompressed, allowing for 100 per cent accurate sound reproduction.

INTERFACE

Interaction with the S2000 is conducted through a propriety GUI displayed on your TV and as a result, navigation is simple.



ETHERNET

The SoundServer S2000 is packed with options, such as the inclusion of an Ethernet connector for web connectivity via broadband.

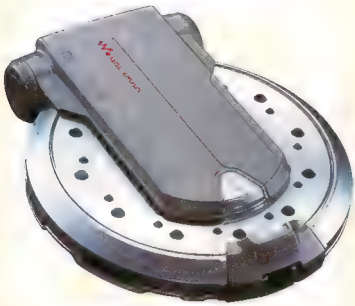
MODEM

Although designed with broadband in mind, the S2000 features an integrated modem to download album covers and track listings.



GET THE GEAR IN

Forthcoming kit to have you salivating over already.









A GOOD PICK FOR YOUR POCKET

www.videologic.com

PURE Digital's PocketDAB 1000 is designed for digital radio on the move. At only £169, the PocketDAB 1000 is bristling with innovations, such as the integrated aerial in the headphones. The blue backlit LCD display is easy to read and with a maximum battery life of 16 hours, you'll feel drained before it does.





PUCKER UP FOR DVD

www.kissdvd.com

Hot on the heels of the Kiss DP-450, the world's first stand-alone DIVX player, Kiss has introduced the DP-500, refining the technology and adding networking in the form of Ethernet connectivity. At £299 the DP-500 is designed to allow access to the user's complete collection of music and video, and Kiss has even suggested that future revisions of the firmware will enable it to stream web-based content.

THE REMOTE THAT'S GOT US TALKING

www.gadgetshop.com

The programmable, full colour, universal remote sounds great, doesn't it? However, that would involve getting up and pressing buttons to set it up. Does it all sound like too much work? Then opt for the new Voice ME remote control, priced at £80. You can set up your own dictatorship by issuing your commands and the Voice ME responds to your every whim.





ORBIT'S IDEA: OUT OF THIS WORLD

www.microboards.com

Copying CDs or DVDs takes too long – even with a 52x CD writer, the time spent burning a CD could be much better used playing a game or watching DIVX. Orbit has a solution – the CD/DVD Copier, at £1,735. Laid out like a photocopier, this beauty frees you and your PC from the monotony of copying, faster than you can say, "What's on this CD?"

PLASMA SCREEN

PIONEER PDP-433HDE

£4,999 **PIONEER**
WWW.PIONEER.CO.UK

Whoever told you that size isn't everything was probably just sparing your feelings – let's face it, a 25-inch television is just embarrassing nowadays. What you really need is the 43-inch plasma screen from Pioneer – this monolith weighs in at just under 32kg. Featuring such new technologies as Dual Screen display, it means that while you and your spouse may argue about the price, you'll never again come to blows about what you watch – you can have two programmes on screen at once. Possibly the best 43-inch plasma screen to ever grace the *PCFormat* walls

PORTABLE DVD WALKMAN

DV-M1 DVD WALKMAN

£999 **SONY**
WWW.SONY.CO.UK

Movie mad and craving a slick Hollywood production even as you read this? If you just can't wait to get home for your next film fix, then the DV-M1 was made with you in mind. Thanks to the inclusion of a powerful battery and slimline remote control, the DVD Walkman is equally at home on the move as it is connected to a full-size screen. And don't imagine that this pint-sized player scrimps on features either – all the major formats are catered for, including Dolby Digital and DTS. A portable picture house for the truly loaded film lover.

DIGITAL CAMERA

SD9 DIGITAL SLR CAMERA

£1,300 (BODY ONLY) **SIGMA**
WWW.SIGMA-IMAGING-UK.COM

When you look back at your photograph album, apart from the mortifying clothes of one's youth, the photos themselves are pretty lacklustre – proof if any were needed that you need to get a new camera. The Sigma SD9 SLR uses an innovative technology unique to Sigma where the CCD captures each colour channel separately. In so doing it delivers arguably the most accurate colour representation seen in a digital camera to date. This breakthrough technology brings the world of professional photography to the masses – at a price

PROGRAMMABLE REMOTE

MARANTZ RC9200

£799 **MARANTZ**
WWW.MARANTZ.COM

Amplifiers, televisions, DVD players and now even consoles have remotes, and while it might seem backward to add yet another to this mountain of controls, you'll soon come to recognise the RC9200 as the best thing you've ever purchased. Sporting a fully skinnable, programmable touch-sensitive colour screen, supported by a huge online archive of designs, with new offerings appearing daily thanks to a thriving community of like-minded enthusiasts, you'll be spoilt for choice. Automate every aspect of your home cinema with this genuinely flexible remote

Surround sound speakers

Immerse yourself in sound with the latest PC surround speaker systems. **Gary Marshall** hunts the bargains.

When let your PC come to the rescue. You don't need to spend lots of cash on expensive sound systems to get a decent surround sound system. You can get a decent system for under £60 and even the best surround sound systems cost a few hundred. The result is a [illegible] sound system that's worth having. It's the perfect way to get rid of the smell of stale beer and sweating hippies.

Here are five speaker sets that offer Dolby Digital 5.1 surround sound, suited to a range of needs and budgets.

ALTEC 5100

£149 Altec Lansing



The 5100s look like speakers [illegible] so [illegible] [illegible] [illegible]

HERCULES XPS 510

£85 Hercules



This heaviest set of speakers on test are the XPS 510, which deliver a creditable 60W RMS from their twin black satellites and beefy subwoofer. Like the ZAs, they're pretty loud but tend to be rather one-dimensional when playing pre-recorded MP3s or live DVD, which tends to become grating as the [illegible]

LOGITECH Z-680

£299 Logitech



With 450W of power, these aren't speakers – they're weapons of mass destruction. When we looked at the Z-680s back in *PCF* HQ, we described them as "Gods own home cinema system" and nothing has [illegible] changed our minds. Get to the subwoofer vibrations make your neighbours' windows explode, keep at the incredible sound quality of the THX-certified speakers. Have your friends green with envy by buying gamely at unnecessary and possibly dangerous volumes! Dyson-heads lay pointing out the hardware DTS and Dolby Digital decoding! Hide from Logitech when it tries to get its speakers back from [illegible]

gold Format

PURE DIGITAL ZXR-550

£68 PURE Digital



The ZXR-550s are the latest in a long line of *PCF* Gold Award winners from PURE Digital, the company formerly known as Videologic (see *PCF* 147). With 65W RMS power, they're more than adequate for a small room, and while the sound quality isn't quite up to the standard of the Logitech set (the smaller subwoofer has to be driven quite hard to get decent levels of bass), it's not a million miles away, and they're a quarter of the price. You don't get a remote control or fancy pseudo-surround effects, and you need a soundcard or DVD player with distinct audio outs for front, rear and [illegible]

gold Format







DETAILS

Listen up, here comes the important bits...

ALTEC 5100

Channel Surround 5.1
Power 73W RMS
Extras Multi-function remote control
Connections RCA stereo inputs, 3.5mm stereo jack
Web www.euro-tech.co.uk
Phone 0870 458 0011

PCFHub VERDICT

ALTEC XA3051

Channel Surround 5.1
Power 56W RMS
Extras Dolby Pro Logic, multi-function remote control
Connections RCA stereo inputs, 3.5mm stereo jack
Web www.euro-tech.co.uk
Phone 0870 458 0011

PCFHub VERDICT

HERCULES XPS 510

Channel Surround 5.1
Power 60W
Extras None
Connections 3x speaker inputs (3.5mm stereo), AC-3 DIN connector
Web http://europe.hercules.com
Phone 020 8665 1881

PCFHub VERDICT

LOGITECH Z-680

Channel Surround 5.1
Power 450W RMS
Extras Dolby 5.1 and DTS decoding, THX certified, wired remote, wireless remote
Connections Digital (optical and coaxial), 3x RCA stereo inputs, 3x 3.5mm stereo jacks
Web www.logitech.com
Phone 020 7309 0127

PCFHub VERDICT

PURE DIGITAL ZXR-550

Channel Surround 5.1
Power 65W RMS
Extras None
Connections 3x RCA stereo inputs
Web www.puredigital.com
Phone 01923 260 511

PCFHub VERDICT

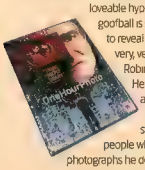
PCFHub DVDs

NIKITA
£14.99 Region 2



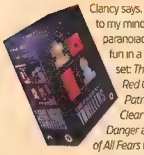
Purge memories of the awful Bridget Fonda remake from your brain – Anne Parillaud is far more convincing as the street-dwelling smackhead who has to choose between execution or life as a cold-blooded government killing machine. Very classy, very violent, and very French.

ONE HOUR PHOTO
£16.99 Region 2



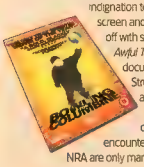
The thinly-painted veneer of loveable hyperactive goofball is scraped off to reveal a new and very, very creepy Robin Williams. He works in a chemist shop, and stalks the people whose photographs he develops. Nice. You'll never be able to watch *Patch Adams* again.

THE JACK RYAN BOX SET
£29.99 Region 2



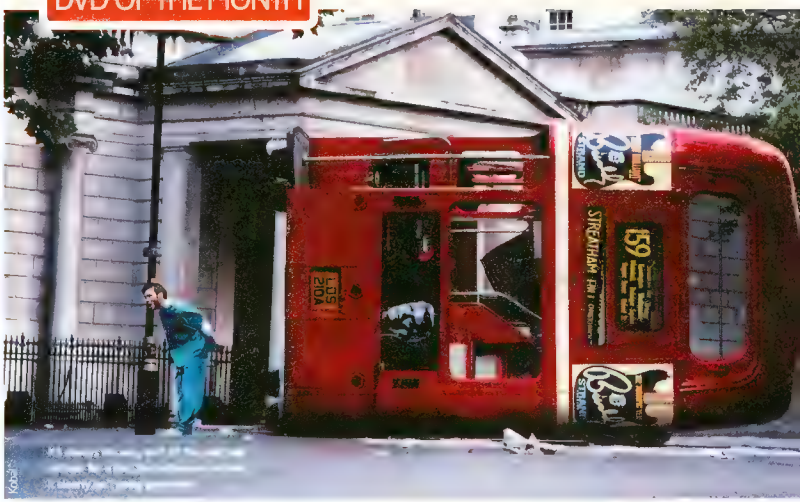
Clancy says, "Welcome to my mind!" Hours of paranoiac war-based fun in a four-disc set: *The Hunt for Red October*, *Patriot Games*, *Clear and Present Danger* and *The Sum of All Fears* rear their ugly heads. But only the first one's worth bothering with.

BOWLING FOR COLUMBINE
£14.99 Region 2



Michael Moore brings his bristly brand of confrontationalism and indignation to the big screen and pulls it off with style in this *Awful Truth*-type documentary. Strongly-put arguments and toe-curling encounters with the NRA are only marred by preachy undertones and the hatchet job on an ancient and confused Charlton Heston.

DVD OF THE MONTH



28 DAYS LATER

£16.99 Region 2 20th Century Fox



Mention zombie movies to anyone and they immediately assume a furrowed expression and utter the ululating zombie call-to-arms. "Brrraaaaiinnnnss!" But for all the hellish stop-start, blood-spattering shock horror that *28 Days Later* descends into, it owes at least as much to a more genteel, paranoiac tradition of British horror – stuff like *The Quatermass Experiment*, *Invasion Earth: 2150* and John Wyndham's creepy *The Day of The Triffids*. Wyndham's novel gives this film its opening few minutes, with convalescing couner Jim waking up in a deserted hospital to find that the whole capital's seemingly packed up and left without him. Gradually, the truth dawns – London has, along with the rest of the planet, been decimated by a plague called Rage, which turns ordinary people into what are, to all intents and purposes, shambling, unwashed Cardiff supporters.

Once Jim meets a few straggling survivors, things settle down into your normal slasher movie nastiness. It's startling stuff, but it's the images of a silent, empty, tomb-like London that'll stay with you, cut and pasted – as the documentary tells you – from myriad DV camera shots snatched during rare moments of quietness.

PCFHub VERDICT
FILM ●●●● | **DISC** ●●●

DETAILS
Picture 185:1 (widescreen 16x9)
Sound 5.1 Dolby Surround
Extras Audio commentary, deleted scenes, making-of, more

BRAZIL

£11.99 Region 2 20th Century Fox



Shades of George Orwell's *1984* and Aldous Huxley's *Brave New World* abound in Terry Gilliam's *Brazil* – although, as you'd expect from a former Python, it's strained through a mesh of manic surrealist humour. Jonathan Pryce is the government drone condemned to a life of paperwork and penury who gets accidentally sucked into a terrorist plot when he tries to correct an administrative error. It's a truly star-studded cast – Michael Palin is surprisingly effective as the terrifying Janus-faced Jack Lint, although Robert De Niro's appearance as a freedom-fighting plumber jars a little. Rubbish disc for what's supposed to be a director's cut.

PCFHub VERDICT
FILM ●●●● | **DISC** ●●

DETAILS
Picture 16:9 anamorphic
Sound Dolby Digital 5.1
Extras *What is Brazil?* documentary, theatrical trailer

FARGO: SPECIAL EDITION

£13.99 Region 2 MGM



The Coens have always been guilty of mining the rich vein of Hollywood convention to fuel their movies, but *Fargo* is something else entirely – a true original that contrasts the simple, homely ways of the folk of Brainerd, Minnesota, (as epitomised by the tenacious, and heavily pregnant police chief Marge Gunderson) with a blood-curdling spiral of murder and messed-up kidnappings, and really horrible methods of corpse disposal (as epitomised by nasty rat-faced psychopath Steve Buscemi). Beautifully shot and consummately performed, the only feelgood movie with a wood chipper gets the treatment it deserves with this set.

PCFHub VERDICT
FILM ●●●●● | **DISC** ●●●●

DETAILS
Picture 16:9 anamorphic
Sound Dolby Digital 5.1
Extras *Minnesota Nice* documentary, interviews, commentaries, photo galleries, trivia tracks, interactive guides, TV spots

Joybook. Plunge and Play.





Joybook 8000

Submerge yourself in a world of pure digital enjoyment with the new Joybook 8000. The expansive wide-screen format gives you a panoramic space on which to edit movies, compile personal music CDs and create your own graphics. And as every Joybook comes complete with BenQ's Windows compatible Q-Media, you can do all this without having to install extra software. You'll also be glad that demanding multi-media programs (and games!) are handled with absolute ease. So, come on and dive in... just remember to come up for air now and again.

BenQ. Enjoyment matters.

For more information, visit www.benq.co.uk or email joybook@benq.co.uk

BenQ

Enjoyment Matters

Personal Mobile Gateways

Has the mobile industry finally found a way to make wireless data both useful and affordable? **Luis Villazon** checks his *Dick Tracy* watch.

A mobile phone with no screen, mouthpiece, speaker or keypad might seem about as sensible as putting Winona Ryder in charge of store security but soon we could all be carrying one. The Personal Mobile Gateway (PMG) is designed to provide a single link from the outside world to your PDA, your digital camera, in fact to just about any gadget you can carry around with you

It ain't heavy

It's such an obvious idea *[Philip K Dick imagined it in Minority Report in the 70s – Sci Fi Ed]*, it's impossible to imagine how it wasn't implemented years ago

Long range wireless communications require large antennae, high power drain and lengthy certification procedures from regulatory bodies. Adding a cellular connection directly to something like a digital camera makes it heavier, complex to configure and use, and increases cost. This makes you less likely to buy it and manufacturers less likely to make it. Most of the cool things that we dream up – a wristwatch with downloadable alarm tones, say – are too expensive to justify in devices that don't have communications built in. Instead, phone manufacturers have tried to add bits of virtually every gadget to their handsets. According to Brian



This IXI camera is PMG enabled, meaning photos can be sent as they're taken to people in the surrounding area.

Modoff of Deutsche Bank Securities, this Swiss army knife approach doesn't work. "The $500 phone with an integrated camera or AM/FM radio may attract interest from the 20-something-and-under crowd, but consumers who can afford such luxuries represent less than 30 per cent of the market. Even worse, deep-pocketed consumers are unlikely to take advantage of gaming apps and multimedia messaging services that generate data traffic." In other words, even you ignore the inconvenience of not being able to leave your five-octave MIDI keyboard behind whenever you take your mobile phone with you, there is simply no incentive for vendors to supply such a hybrid because they will never make any money from it.

Neat and discreet

We first reported on PMGs back in *PCF* 144 when they were called Personal Network Gateways. The hardware is simple: a cellular phone transceiver is used to connect to the internet or another PMG, and individual peripheral devices use Bluetooth to connect to the PMG. Bluetooth is much cheaper to add to a device and takes up less space than cellular communications. You also don't have to wait two years for certification, like you do with a mobile phone. "Even if you only have a mobile phone, the PMG concept has advantages," says Jamie Lawton, senior adviser to communication analyst Brent Hallet Ltd. "Your handset can be much lighter and cheaper – cheap enough that you can imagine having several – one for work, one for home, or maybe different ones to go with different outfits. They would all use the same PMG so the phone number wouldn't change."

Other PMG peripherals that have already been demonstrated at trade shows include handheld consoles that can receive new games, a pen that records and emails spoken messages, and a watch that can receive SMS and check your timetable. In client-server terms, these would be thin clients but the nascent PMG industry has taken to calling them sleek devices, in case fat Americans think 'thin' means 'less.' These devices are from big-names such as Sanyo and Seiko but the 'Boost Guarana' for the PMG has come from Samsung, which announced a PMG phone at CeBIT (**www.samsung.com**)

Putting the PMG back into the phone might seem to miss the point but

SOFTWARE SECRETS

IXI's code glues the PMG concept together.

The clever part of the Personal Media Gateway is not the hardware, it's the software that passes data between the Bluetooth and the cellular networks. IXI Mobile produces this software and this company is the main driving force behind PMG. Without its code, every sleek device would need to be explicitly compatible with every brand of PMG and every other sleek device before they could exchange data. IXI's software provides a common interface for every device.



PMG devices haven't yet included the ability to remotely unbutton tops, but this man apparently lives in hope



If you want, you'll automatically be sent everything from special offers to fashion tips. So what happened here?

it's pretty clever psychology. A PMG by itself can't do anything; Piggybacking on the phone is a good way to make sure it doesn't get left behind. The Samsung PMG phone can't be separated from its PMG but future models might feature a detachable PMG. This would enable us to upgrade the comms engine and the handset interface – customised faceplates on steroids.

PAN's people

Mobile companies have slit their own throats with aggressive handset discounting and generous call minute packages. Once you have a PNG phone, though, you can just add any 'designed for PNG' device to your PAN (Personal Area Network). All your gadgets can talk to each other, they can talk to any computer connected to the internet, and they can talk to any other gadget within 10 metres of anybody else's PNG.

For all the excitement over wardriving, Wi-Fi Ethernet is an indoors protocol for connecting PCs. Adding access points to shops (to beam adverts and promotions) is expensive to set up and maintain, and only works if you have your laptop with you. With PNG, you can exchange voice, instant messages, pictures and documents. Mobile operators can push updates over the air and, instead of waiting for wireless coverage to creep from London, the whole service is available from anywhere you can get a mobile signal. **PCF**

ARE YOU BLUE?

Your phone might already be Bluetooth compatible without you realising.

All the following mobile phones have Bluetooth already built in: Ericsson R520, T39 and T68; Nokia 6310, 6310i, 8910 and 8910i; Phillips fisio 820; Siemens S55.

This means that they can connect to your PDA and PC for mobile email and internet, work with a Bluetooth headset and synchronise data between the handset and the PC or laptop.

If you have an Ericsson T68i, T610, P800 or Nokia 7650 or 3650, you can do all that but you can also transfer images and video between your handset and PC or laptop.



A phone like this might soon be your digital passport

SLEEK TREATS

Bluetooth gadgets, so new we have to use spy pictures.

SEIKO PNG WATCH

www.sii.co.jp



Next time your phone rings check your watch to see who's calling before you bother to rummage for it in your bag. The *a;ware;able* can also receive messages and SMS alerts plus check your daily agenda. There are even ringtones and logos for "endless" customising fun. The suckiest name of the year, by a country mile.

HIT INCORPORATED MESSAGE PEN

www.hit-inc.com



This PMG-compatible voice memo pen allows you to record brief notes by dictation. These messages can then be sent to answerphone services on a colleague's mobile or added to a do-list item on your PDA.

INFOHAND DIGITAL CAMERA

www.infohand.co.kr



VGA digi-cams that are tiny and cheap are nothing new but the *Magic Camera* can use your mobile phone screen to review images and the cellular connection to send them to other phones or by e-mail to a PC. Connection is via cable or Bluetooth.

SANYO ALVISS SUITE OF PNG DEVICES

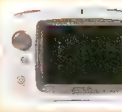
www.sanyo.com



AlvissTM is the code name for a series of concept devices that will be PNG compatible. Each device is credit card sized and can receive services over the air from mobile network operators.

GAME PARK HANDHELD GAMES CONSOLE

www.gamepark.co.kr



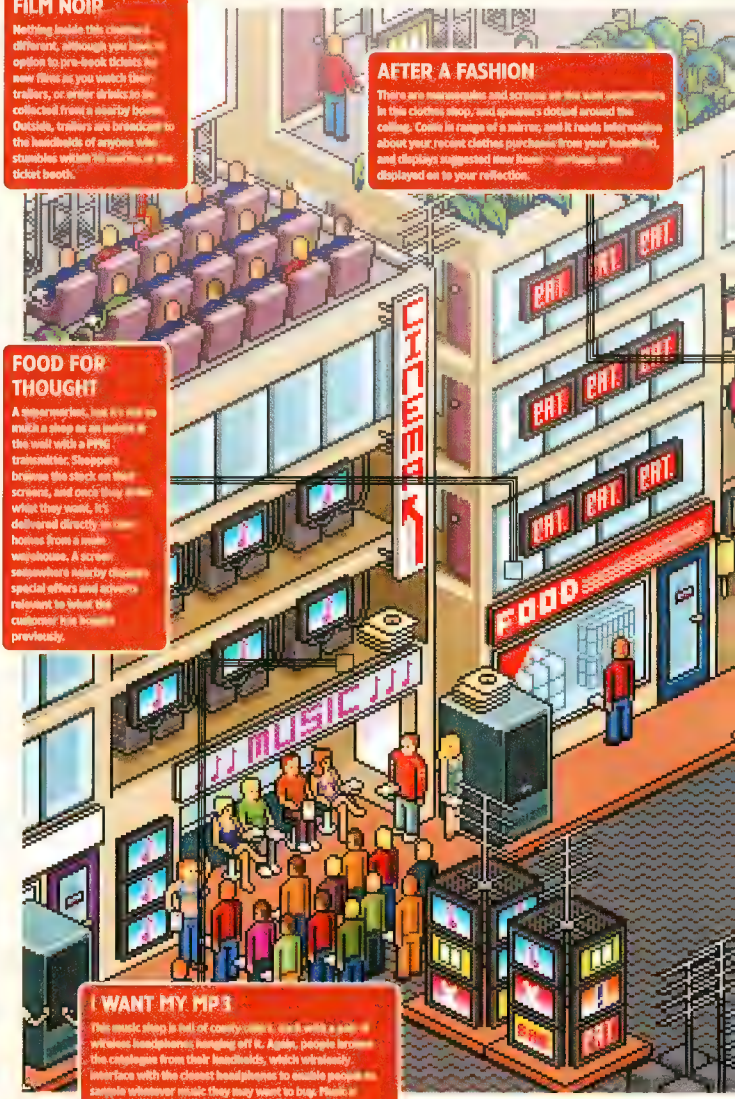
GP32 began with a USB connection to a PC but by linking wirelessly to your cellphone, the *GP32* will be able to download new games over the air as well as join multiplayer games and post high scores to league tables. You can also use it to listen to music and watch movies.

RADIO TIMES
There's a lot of [illegible] wireless standards out there.



PERSONAL MEDIA GATEWAYS IN ACTION

It's crystal ball time, as we prophesy a PMG-enabled high street of the future.



802.11B

Also known as Wi-Fi. This uses the unlicensed (and crowded) 2.4GHz part of the radio spectrum. It operates at up to 11Mbps but can scale down speed to improve reliability if the reception is particularly poor. 802.11b is the cheapest and most widely deployed of the wireless networking standards.

GPRS

An additional service that can be added to GSM networks, as well as the TDMA networks more popular in the US. GPRS adds a packet-switched data service to mobile networks with a theoretical maximum speed of 172Kbps, though more likely speeds are closer to 40Kbps. Data transfers are charged by the byte, rather than the second.

802.11A AND G

Both operate at 54Mbps but 802.11a uses the 5.8GHz frequency, which doesn't penetrate as far through walls and isn't backwards compatible with 802.11b. 802.11g is backwards compatible but the standard hasn't been officially ratified yet.

802.11B+

A proprietary extension to 802.11b used by D-Link and US Robotics, as well as several others, to double the speed of 802.11 b to 22Mbps without sacrificing backwards compatibility.

BLUETOOTH

Also uses 2.4GHz but the range is restricted to 10 metres. Bluetooth devices use a different modulation scheme to 802.11x networks and are not compatible with them. They are also much slower, at just 1Mbps. The advantage is that Bluetooth is very cheap and much easier to add to a wide range of devices.

GSM

The mobile phone standard used in Europe, Australia and some parts of the US. GSM networks use 900MHz in Europe and 1,900MHz (1.9GHz) in the US. There are also 800MHz and 1,800MHz flavours available. GSM connections are circuit switched and designed primarily for voice traffic and data is limited to 9.6Kbps.


ADULTS ONLY
BY THE BOOK
BOOKS BOOKS
THREADS
TELL ME MORE
BAR1
DRINK IT ALL IN

Network your Xbox

Alec Meer reveals how to rig your Live!-equipped Xbox console up to a wireless network, or even play *Halo* over a broadband connection.

We are narrow-minded bigots here at *PCFormat*, all resolutely unable to see past the noses on our faces or the PCs on our desks. In our stunted world-view, consoles are evil. Evil for stupid people, at that. Which no doubt explains why no fewer than three people on the team have Xboxes. But just because we have suffered such a profound moment of weakness doesn't mean we're incapable of adapting the Xbox to our own nefarious schemes. Xbox Live!, the newish online service for the console, is entirely dependent on a broadband connection, you see. Which usually involves a PC. And because there's a PC involved, we can change things. In this case, we can create a wireless network and stick the Xbox on that, instead of having a horrible grey RJ45 cable trailing down from the study to the lounge.



LIVE IS LIFE

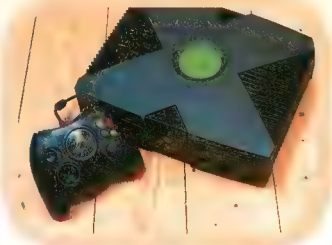
What is Xbox Live!, and which games support it?

It's not complicated, really – Xbox Live! is online gaming, but for Microsoft's lard-arsed games console. You need to have broadband already, and £40 buys you a CD that installs the Live! software and creates an account with a year's worth of play on it. You also get online versions of *Moto GP* and *Whacked!*, plus a slightly poxy earphone and mic headset, which enables you to converse with the pasty, prattling, pre-teen pissants playing against you all over the world.

www.xboxlivecommunity.com

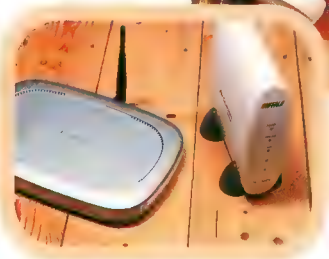






THE GAMES SO FAR

CAPCOM VS SNK 2
MECH ASSAULT
MOTO GP
MX SUPERFLY
NBA 2K3
NCAA COLLEGE BASKETBALL 2K3
NHL 2K3
NHL FEVER 2003
PHANTASY STAR ONLINE: EPISODE I & II
TOEJAM AND EARL 3
TOM CLANCY'S GHOST RECON
TOM CLANCY'S SPLINTER CELL (DOWNLOADABLE MISSIONS ONLY)
UNREAL CHAMPIONSHIP
WHACKED!



LIFE WITHOUT WIRES

How to hook your Xbox up to your home wireless network.

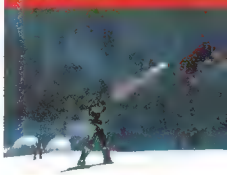
CONSOLE KIT

You need an Xbox console, of course – they're currently selling for £130-£160 and if you're considering online play, are well worth it for the likes of *Ghost Recon*, *Mech Assault* and, of course, the upcoming *Halo 2*, which is set to be the first mega-hit of 2004. They come with an Ethernet port built-in, so there's no need for any rewiring. You'll also need to pick up an Xbox Live! kit, which costs £40.

NETWORK OPTIONS

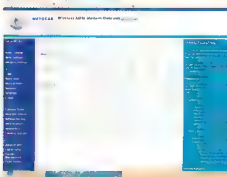
Next you need some kind of wireless connection. You have the choice of sticking a Wi-Fi card into a PC and creating an ad hoc network (just two machines), or picking up a wireless access point or router instead. There are several available, but two good ones to opt for are Buffa o's wireless broadband router (£90) or Netgear's Wireless ADSL Internet Gateway (£173, with a built-in ADSL modem).

WOT, NO HALO?



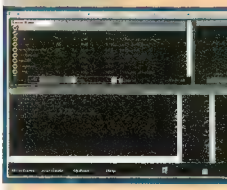
WHAT YOU NEED

You need a PC with broadband and a router, as well as an Xbox with *Halo* and a standard Ethernet cable. Visit **www.xbconnect.com** to download tunnel software that basically tricks the Xbox into thinking a net-arranged game is actually a direct cable link to another console.



CONFIGURATION

Once your router is set up, type the appropriate IP address into the internet browser on your PC (usually 192.168.0.1 or 192.168.1.1) to reach its config page. You then need to forward incoming and outcoming port 8602 to your PC's IP address (usually 192.168.0.2). More detailed information for most common routers can be found at **www.xbconnect.com**



FREE ONLINE PLAY!

With the Xbox cabled up to your router and any firewall software disabled or configured with appropriate access privileges, load up *Halo* or another supported game, go to Multiplayer and then System Link Play. It gives you a waiting message and sits there patiently while you pop over to your PC and find a game with an open spot with the XBConnect software. Click to join in and you're away.



WI-FI CONVERSION

You can't just plug a Wi-Fi receiver into the Xbox because its puny operating system doesn't allow you to install drivers. What you need is something that can convert an 802.11b wireless signal into standard Ethernet/LAN language. Again, Buffalo (**www.buffalo-technology.com**) and Netgear (**www.netgear.co.uk**) offer solutions: the former's Ethernet Converter is £75 and the latter offers the soon-to-be-released ME101.

INTERNET ACCESS

Finally, using a PC – a Shuttle or Epia won't interfere with your snazzy lounge look – you can set up access rights and communication for the wireless access point or router and the Ethernet bridge. Once that's done, the Xbox simply thinks it's connected directly to an Ethernet cable attached to a router or broadband, and you can have the Xbox in a separate room to your connection and PC.

GET THE BLUES

Bluetooth means more than phones and headsets: look for a lot of hot devices in the pipeline.

TOSHIBA HOPBIT

www.toshiba.com



We should see this 5Gb Bluetooth hard drive in the UK this year; in Japan it sells for the equivalent of £250. Get at your data from devices where you can't plug in a hard drive, without taking it out of your bag. (We can see several *Mission Impossible* plots forming as we play with it.) It also has a deadly slow USB1.1 connection for normal wired use.

SONY ERICSSON HBM-30 MP3 PLAYER

www.sony.com



Maybe the first Bluetooth MP3 player, the HMB-30 stores your music on Memory Stick and works as a hands-free set for your mobile phone: when you get a call, it turns the music down and shows the caller's number. Due this summer.

NOKIA IMAGE VIEWER SU-2

www.nokia.com



Show off pictures from your camera phone on your TV screen by plugging the dinky Image Viewer into the back of your TV set and setting up a slideshow on your Bluetooth mobile. For all those holiday bores out there with technological expertise. Due this summer.

NOKIA DIGITAL PEN SU-1B

www.nokia.com



Write phone messages with a real pen (on special paper) and send text and drawings to your mobile phone to send as messages or back to your PC to keep. Due this autumn, the Digital Pen stores up to 100 A5 pages.

CDP-24 201 CORDLESS DATA PHONE

www.wave-tele.com



If you want to use your devices further apart, this £199 access point connects to your PC and includes a cordless phone – or you can use Bluetooth headsets to phone on your home line. Plug it into two phone lines to talk and surf at once.

Bluetooth your home

Connect your devices without a leash: **Mary Branscombe** cuts through the Gordian knot of cables with Bluetooth.

Cables don't just look ugly trailing around the room; they're a pain to plug in and unplug, and you don't want to drag a bag of cables with you when you travel. Bluetooth replaces the cables between your gadgets. Let's get one thing straight: Bluetooth isn't going to replace Wi-Fi for your home network – the bandwidth is around 720Kbps compared to 11Mbps or even 54Mbps with Wi-Fi, and standard Bluetooth only reaches 10 metres or 100 if you have an access point. It is much more flexible than Wi-Fi, however. You don't need to worry about setting up network connections since Bluetooth devices find each other and form partnerships. Any Bluetooth device can talk to seven others, making a piconet (a very small network), so you could use your PDA to grab a file from your PC and fax it via your mobile phone, without laying a finger on either of them.

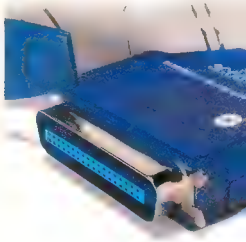
Think modular: a new Bluetooth gadget such as a printer, hard drive or GPS navigator can add features to all your Bluetooth devices at once, from your phone to your PDA. **PCF**

"ANY BLUETOOTH DEVICE CAN TALK TO SEVEN OTHERS"

NETWORKING BLUETOOTH DEVICES

How to set up your personal area network, and what to do with it once you've set it up.

There's a million different Bluetooth adaptors on the market, for all sorts of sockets.



GETTING IN THE WAY

No wireless connection is perfect, but some are more perfect than others. Is Bluetooth?

You don't want Radio 1 going crackly every time you use your wireless mouse, so radio waves are allocated very strictly. Bluetooth is in the 2.4GHz band, along with wireless networking (Wi-Fi), DECT cordless phones, garage door openers and microwave ovens (because that's the frequency that makes water molecules vibrate really fast). Using Bluetooth and Wi-Fi together can slow them down, but modern devices are smart enough to work out which channels are busy. Don't worry about lining up ports, as with infrared – Bluetooth goes through most things, though thick or metallic objects interfere. One thing to remember – phone calls get priority on Bluetooth, so everything else will slow down.

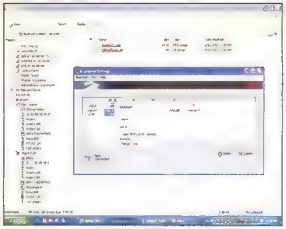


You can use Bluetooth devices up to 100 metres apart if you fit an access point.

PICK A PROFILE

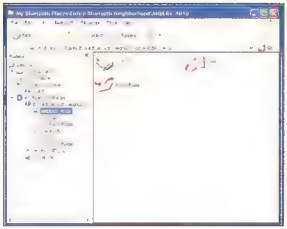
Not every Bluetooth device can talk to every other device.

Bluetooth is just an invisible cable; the devices on either end still have to be able to talk to each other. To communicate, they must have the same profile: if your Bluetooth PDA doesn't have a printer profile, for example, it can't send files to your printer. There are profiles for specific devices, and for different ways of sending files, such as synchronising changes in your diary or transferring a whole file, such as a music track. Not every Bluetooth device has all the profiles – you wouldn't want to send a fax from a headset, for example, so check before you buy.



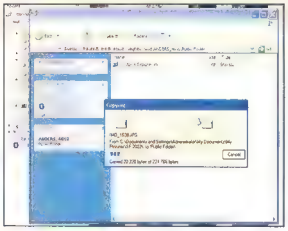
STEP 1 GETTING AN ADAPTOR

To start with, you need a PC with a Bluetooth adaptor – there are plenty of USB adaptors that you can plug in. Windows XP doesn't have full Bluetooth support, so you get software with the adaptor to help you detect other devices. First you have to set up a connection and then you have to specifically connect to a device.



STEP 2 CREATING PROFILES

Different devices have different services available, depending on the profiles they support. This desktop PC has the Comet Labs USB adaptor (£42, www.cometlabs.com) installed and in My Bluetooth Places we can see a Toshiba notebook with built-in Bluetooth. You need extra software to share a whole drive but we can transfer files back and forth using the Public Folder.



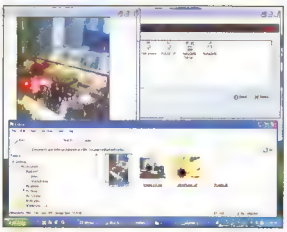
STEP 3 EASY FILE TRANSFER

Once you've made the connection and you can see the other PC that you want to copy files to or from, you can just drag and drop the files from one folder to another. The 720Kbps transfer speed is slower than Wi-Fi but a 2Mb file transfers in around a minute.



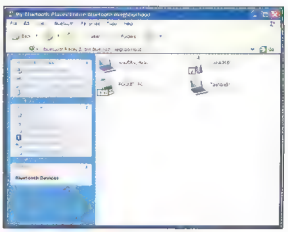
STEP 4 CONNECTING A PDA

Bluetooth is ideal for connecting a PDA without the bother of a cradle and cables. The Bluetooth Wizard on the iPAQ H5450 Pocket PC (reviewed on page 109) shows you exactly what you can connect and transfer. If your PDA doesn't have Bluetooth, plug in a Compact Flash card (£99, www.socketcom.com/product/BL4508-309.asp) or Toshiba's new super-small lower power SD card (£99, http://uk.computers.toshiba-europe.com).



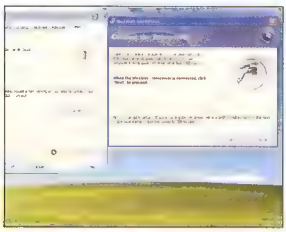
STEP 5 TRANSFERRING PICTURES

As well as using a Bluetooth mobile phone for getting online from your notebook or PDA without fiddling around lining up the infrared ports, you can transfer pictures from a camera phone such as the Nokia 3650 back to your PC very easily. On the phone, just choose Send > Send by Bluetooth and the image arrives in your Bluetooth inbox folder. (Nokia 3650: £292 handset only, £58 with contract, www.nokia.com/nokia/0,,2273,00.html.)



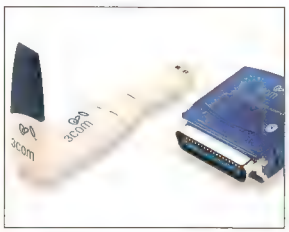
STEP 6 TWO WAY CONNECTION

Bluetooth is a two-way connection – as well as browsing for devices from the PC, we can drop files on to the PC from a PDA or mobile phone. They go into the Public Folder directory the Bluetooth software creates in My Documents; the green arrows show a file is arriving.



STEP 7 OTHER PERIPHERALS

Without cables in the way, you can put your keyboard and mouse anywhere you like – handy if you're putting a tiny PC in the living room. This is how Microsoft's Bluetooth mouse shows up in Windows; extra tabs on the Mouse control panel and a setup program that walks you through getting connected. (Microsoft Wireless Optical Desktop for Bluetooth: £11, www.microsoft.com/uk/keyboard/wodBlue_info.asp.)



STEP 8 PRINTING FROM ANYTHING

HP and Epson have printers with Bluetooth as an option – but you can connect to any parallel port printer via Bluetooth with 3Com's Wireless Bluetooth Printing Kit (reviewed on page 100). It's a high-power device so it works from up to 100 metres away and as well as using a PIN you can set up user accounts with passwords.

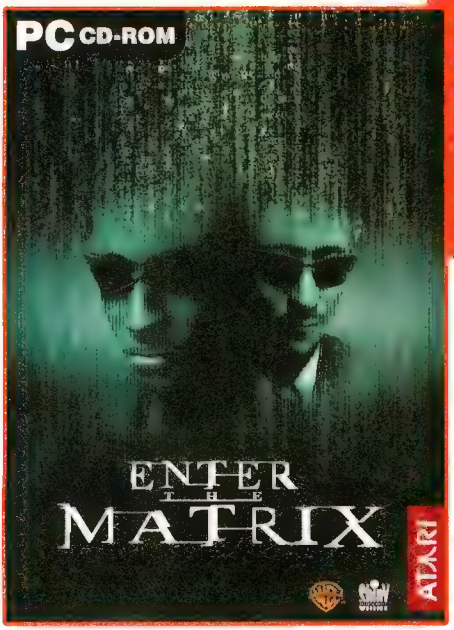


STEP 9 WIRELESS MAPPING

Losing the cable is great for devices such as GPS receivers where you want to position them well away from the PDA or notebook you want to use them with to get good reception – and you can use them from more than one device. Just turn on the GPS and start your map software. (Socket Bluetooth GPS Nav Kit: £479, www.socketcom.com/product/gps.asp.)

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"An unprecedented amount of interaction between the film and the game"

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Games Planet!

Gameplay

Games news/Previews/Reviews



ADAM OXFORD REVIEWS EDITOR

NO MAN WITH NO NAME

Doubtless by the time you read this, you'll know more about the 'other' sequel of the year than I do right now, but it's clear that *Doom III* has suddenly gotten itself a competitor. The news is in that the most unassuming and unlikely hero of gaming is returning to our screens this September. Gordon Freeman is alive!

Credit to Valve, though – the world had just about given up on it ever creating another game of worth, and its status as a one-hit-wonder seemed sure. It's frustrating for press and punter alike when a developer goes taciturn and refuses to speak about a game until it's finished, but the first screens to appear on the web suggest the wait has been worth it. Should all development teams follow its model – no, of course not. Should the ones who can live up to the non-hype? Well, maybe. Why not talk about *Half-Life 2* on our forums? **http://forum.pcformat.co.uk**
adam.oxford@futurenet.co.uk

MEET THE PCFormat TEAM



BEST SELLERS

So which games are breaking ground this month faster than a deep-south chain-gang?

YOU'VE BOUGHT... (FULL PRICE)

POSITION		GAME	PUBLISHER	PCF RATING	GENRE
↑ 1	(-)	CHAMPIONSHIP MANAGER 4	EIDOS	PCF 148 90%	MANAGEMENT
↑ 2	(-)	VIETCONG	TAKE 2	PCF 147 87%	FIRST-PERSON SHOOTER
↑ 3	(-)	FREELANCER	MICROSOFT	PCF 148 90%	SPACE SIMULATION
↑ 4	(6)	THE SIMS: UNLEASHED	EA	PCF 141 60%	MANAGEMENT
↓ 5	(4)	THE SIMS: DELUXE	EA	PCF 107 93%	MANAGEMENT
↓ 6	(1)	COMMAND & CONQUER: GENERALS	EA	PCF 146 87%	REAL-TIME STRATEGY
↑ 7	(-)	DELTA FORCE:BLACK HAWK DOWN	NOVALOGIC	PCF 148 86%	FIRST-PERSON SHOOTER
↑ 8	(9)	THE SIMS: ON HOLIDAY	EA	PCF 136 63%	MANAGEMENT
↓ 9	(3)	TOM CLANCY'S SPLINTER CELL	UBI SOFT	PCF 145 84%	ACTION ADVENTURE
↑ 10	(-)	THE SIMS: HOT DATE	EA	PCF 131 82%	MANAGEMENT

YOU'VE BOUGHT... (BUDGET)

POSITION		GAME	PUBLISHER	PCF RATING	GENRE
→ 1	(1)	SIMCITY 3000	DICE MULTIMEDIA	PCF 93 80%	MANAGEMENT
↑ 2	(3)	THEME HOSPITAL	DICE MULTIMEDIA	PCF 68 90%	MANAGEMENT
↓ 3	(2)	THEME PARK WORLD	DICE MULTIMEDIA	PCF 104 90%	MANAGEMENT
↑ 4	(-)	DEUS EX	SOLD OUT	PCF 113 95%	FIRST-PERSON SHOOTER
→ 5	(5)	COMMAND & CONQUER: RED ALERT	DICE MULTIMEDIA	PCF 65 90%	REAL-TIME STRATEGY

Chart-Track Based on chart compiled by ChartTrack for week ending 19 April 2003 ELSPA (UK) Ltd

READER'S CHARTS

The games that are really sitting on your hard drive...

YOU'VE PLAYED...

POSITION		GAME
↑ 1	(-)	CHAMP MAN 4
↑ 2	(2)	C&C: GENERALS
↓ 3	(1)	TOCA: RACE DRIVER
↓ 4	(5)	SIMCITY 4
↑ 5	(-)	FREELANCER

YOU WANT...

POSITION		GAME	PREVIEWED IN ISSUE
↑ 1	(-)	HALF-LIFE 2	N/A
↑ 2	(4)	GTA: VICE CITY	PCF 148
↓ 3	(2)	DOOM III	PCF 137
↓ 4	(3)	DEUS EX 2: INVISIBLE WAR	PCF 138
↑ 5	(-)	HALO	N/A

Mail the game you're playing most and the game you most want to see to **pcfmail@futurenet.co.uk** with the subject 'Chart' for a chance to win the Chartrack number one game

OUR KEY PROMISES

1. We only review finished games
We never review code that isn't signed off as finished by its publisher. That means we can test thoroughly before we make recommendations.

2. We always say what we think
Our reviewers are passionate about games, but we're absolutely incorruptible. We cannot be bought or bullied, and that's company policy.

3. We match games to reviewers
The combined experience of our games reviewing panel is unsurpassed. We love games, so every game is reviewed by a hardcore fan of its type.

4. We give you a clear recommendation
You want to know what to buy next. We use boxes, diagrams, sidebars and pictures, combined with clear verdicts, to make that easy.

5. We listen to you
Of course we're always right, but sometimes we're less right than others. Join us at **http://forum.pcformat.co.uk** to share your gaming opinion.

OUR SCORING SYSTEM

0-19% Unplayable, lazy, shoddy, insulting
20-49% The germinal of a game, underdeveloped
50-69% Solid ideas, built on precarious foundations
70-79% A pleasing genre title, but no mass appeal
80-89% A justifiable investment for all, just short of genius
90+ Outstanding. A *PCFormat* Gold Award winner

Gold Format

PCF Game Guide

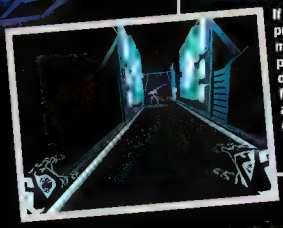
Our quick reference tells you what each game contains

SCI-FI STUFF Robots will enslave you all. We're collaborating.
IQ TEST Full of brain-taxing conundrums.
VIOLENCE Still safer than a Friday night out.
ALIENS Coming over here, sleeping with our jobs.
SEX Clever or crass? Up to you to decide.
POLITICS Get them before they get you.
CARS Either for racing or just getting around.
FANTASY RPG Containing elves, orcs and giant spiders.
BAD HAIR But not as bad as www.mullet.nxy.com
CRIME Proving that it either does or doesn't pay.
BUSINESS Spreadsheet fans stay awake.
WAR Chickenhawk Bush www.warbush.com
HORROR Scarier than the 10 O' Clock news.
BAD LIP SYNCH Surely it can't be that hard to get right?

The film was a little tough to swallow for the Casio-toting masses in the [illegible]hties, but it's since [illegible]ved cult status

THERE CAN BE ONLY TRON

Settle matters of honour by chucking discs at each other.



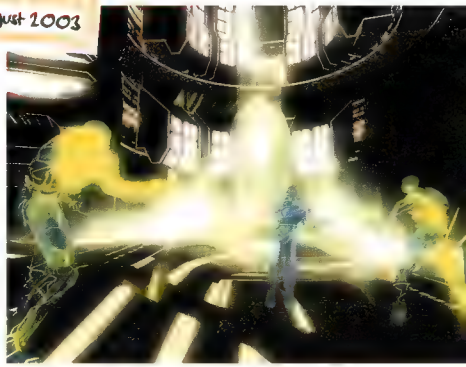
If you can remember the *Discs of Tron* arcade game, you'll probably get your pixels in a twist over the Frisbee-flinging multiplayer mode, with a selection of maps containing four platform-stocked arenas linked by a spectator area. Combat is disc-only, so you have to master the technique of steering it in flight and striking while your opponent can't block you, as well as scoring hits through crafty ricochets. Each map has a slightly different setup, enabling you to knock out crucial parts of the scenery as well as attack your opponents, and with up to four people on each team, the action should get fast and furious.

August 2003

↘ FIRST-PERSON SHOOTER

TRON 2.0

Conflict, kidnapping and guns lurk in Monolith's mainframe. Jon Hicks managed to get a coffee out of it.



Despite the fact that the gaming industry is barely old enough to get a steady girlfriend, settle down and start moaning about house prices, *Tron* is something of a wrinkly. The film came out way back in 1982, and the first game that followed it was a steam-powered arcade behemoth. Twenty years later, newly formed Disney division Buena Vista Games has dug the film out of the bottom of its intellectual property box and handed it over to Monolith. So we nipped over to Seattle to see how it's been getting on with things.

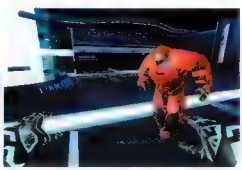
Tron in 60 seconds

Quite well, as it turns out. While the film's super-stylised universe proved a little tough to swallow for the Casio-toting masses back in the eighties, it's since achieved cult status and Monolith has done a fine job on its new version. "Everything is updated, new and fresh, but with these really nice ties to the past," explains Chris Hewitt, director of development and the producer of *Tron*. "Not only for nostalgic reasons – they're just plain cool." Thus you spend the game in an environment bedecked in neon, with the real world only appearing in cut-scenes as the unwillingly digitised protagonist Jet Bradley works his way through over 30 hard drive based levels, as he attempts to find his father Alan, the Bruce Boxleitner character of the film. Monolith asserts that everything from the film is represented in some form, and while we can only report on the disc weapons and the light cycles, we're assured that tanks and Recognisers have their place, too, along with Tron himself in an as-yet top-secret role. Even the new music captures the synthesisers-are-the-future soundtrack.

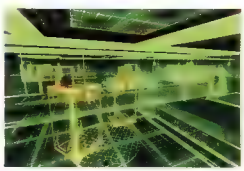
The film's legacy also plays a big part in the game, which sees you slogging through a series of levels, collecting information, interacting with friendly programs and slaying the less friendly, with the emphasis on action rather than stealth. The basic weapon is the boomerang/Frisbee hybrid of the disc, which hopefully will prove to be the discerning gamer's weapon of choice. "It's not simply throwing a Frisbee at them and causing damage," says lead game designer Frank Rooke. "We wanted to bring the disc to life and have the sort of battles we saw in the movie, which was a combination of throwing the disc and blocking." While a basic lob has a vague homing function, you can steer it in flight for a more precise aim, and use it to block opponents' attacks. You won't be limited to this alone, though. Monolith has taken ↘



The requisite nubile female character, Mercury's revved up and ready to go.



Enemies come in all colours, as long as they're vaguely radioactive.



You can see real-world characters moving as figures noticed by the security system.

Traitorous security chief Thorne has been corrupted in the digitisation process, and infects other programs to form an army.

DEVELOPER
MONOLITH

PUBLISHER: BUENA VISTA GAMES
WWW.TRON20.NET
020 8222 1000



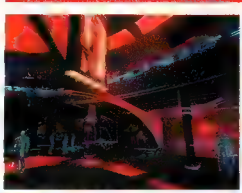
Frank Rooke, lead game designer at Monolith.

WHO IS MONOLITH?
Buena Vista wants a grown-up game, so it has gone to a grown-up gaming company. Monolith has been around for eight years and has built a substantial reputation on the back of titles such as *Shogo*, *Aliens vs Predator 2* and the excellent *No One Lives Forever* series. Its influence spreads even further thanks to its well regarded LithTech game engine, the latest Triton version of which powers *Tron 2.0*.

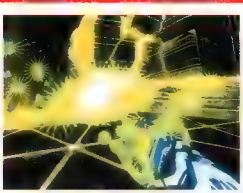
WHAT IS IT DOING? Once it's got *Tron 2.0* out of the door, Monolith will still be toiling away on *No One Lives Forever 2* for other platforms, but its next big thing is an MMORPG based on *The Matrix*. The company has been very quiet about this since announcing it last May and remained tight-lipped during our visit, but having seen the 360 it's done on *AvP* and *Tron*, there's every sign it's going to be doing very well out of film licences this year.

IT'S ALL GEEK TO ME

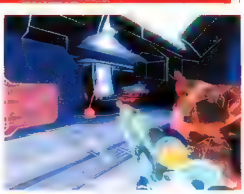
In which we wander in for a LAN party and, assuming you know a lot about system administration...



1 MINE'S A BYTE
Here's where the programs hang out when they aren't working. The Progress Bar. Geddit? Other game environments are dotted with the crates and cupboards of the computing world – data blocks and archive bins.



2 DIGITAL DISEASES
The Infected Server is the lair of digitised-human-gone-bad Thorne, and his virus-infected minions. Slay them and they leave their weapons in a Core Dump, but the virus can infect your subroutines and ruin your weaponry.



3 GAME FOR A LOL
The weapons are all suitably titled as well, from the Prankster Bit guided missile to this LOL railgun – which is, naturally, the Gold release of that particular weapon. Oh, how we long for a chatroom railgun...

PRESS PASS?

The *Tron* film is a cult favourite with geeks the world over, and Disney is playing on its fame for the promotional campaign.



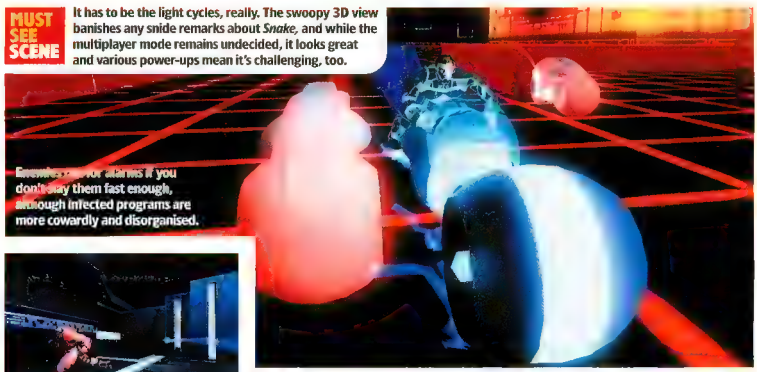
THEY SAY

POSI-TRON "An epic adventure with innovative gameplay capturing the unique visual style of the film. Players, armed with an assortment of digital weapons, shields and gadget subroutines, challenge other programs on the light cycle Game Grid, contend with deadly adversaries and circumvent dangerous obstacles as they travel through never-before-seen settings in PC games."

WE SAY

NEU-TRON Well, you can see from the screenshots that as far as following the film goes, Monolith has got it bang on, and there's no doubt that the *Tron* fans are going to be very happy indeed. That said, the basic gameplay doesn't look as innovative any more, and while the subroutine elements look interesting we'll defer judgement on whether there's anything truly new beneath its candy clothing. Oh, and that music isn't going to be universally adored, either.

MUST SEE SCENE **It has to be the light cycles, really. The swoopy 3D view banishes any snide remarks about *Snake*, and while the multiplayer mode remains undecided, it looks great and various power-ups mean it's challenging, too.**



Enemies aren't too forgiving either if you don't slay them fast enough, although infected programs are more cowardly and disorganised.

care not to ostracise the boomstick brigade and there is a selection of other weapons recognisable as shotguns, sniper rifles and the like, albeit with a futuristic appearance and some nifty-looking effects. You start with basic Alpha versions and upgrade them to Gold as you progress by swiping them from fallen enemies or improving them at various points.

Go configure

As well as making for more effective weaponry, this plays a big part in the player configuration system, which Monolith calls the subroutine system, and is jolly pleased about. It enables you to set up your character to suit what you're doing at the time, filling up a finite number of slots with things such as armour, weapons and the like. The more advanced your weapons, the less space they take up. But the amount of space changes according to the setting, so once you venture off into more restricted levels, such as the PDA or Alan Bradley's old PC, you have to be careful with your allocation. Rooke's keen that this doesn't put people off though. "We wanted to create the game to have different levels of accessibility – that was something that was very important for Disney. You can still play the game without jumping into the subroutine system." The same is true of the *No One Lives Forever*-style experience points, which enable you to boost your character's qualities – they're a useful benefit, but the less dedicated can succeed without them. No such problems for the light cycles, which have been redesigned by the original film artist Syd Mead and offer a step up from the simple addiction of their arcade progenitors.

Disney has been remarkably hands-off for this project, and Rooke and Hewitt are openly surprised at the amount of freedom they've been given to realise *Tron 2.0*, which is likely to be the first release for the new grown-ups' gaming subdivision, Buena Vista Games. While it's looking like they've done a good job, Hewitt admits that even the younger members of his own team can't quite see the attraction of the film, so there's a lot resting on their ability to make the game appeal beyond its retro styling. Look out for our review in the summer. **PCF**



Weapons from the infected programs are harder to control and less accurate.

TRON SUBSTANTIATION

Frank Rooke talks about reputations and keeping it real.

PCF The original *Tron* film and game were hugely influential. Was that a tough reputation to live up to?

Frank Yeah, there was a huge reputation. We felt a lot of weight on our shoulders because Disney gave us the reins to do something totally original and let us be totally creative, and it was asking us to do the franchise justice. We don't want to lose the *Tron* fans, but in a way we wanted to resurrect the *Tron* franchise... So yeah, there was a lot of pressure. And if we fail, we could bury the franchise; that's scary!

PCF Buena Vista Games is part of Disney's push to become a respected producer of grown-up games. Do you think *Tron 2.0* is the game that'll make people take it seriously?

Frank It's a really good first step. It's hard to tell whether it'll convince everybody, but this is a serious game, it's not a kid's game, it's something that adults will appreciate. That's what Disney set out to do, and that's what we set out to do.

PCF Do you think that's why it went for a *Tron 2.0* game, because it'll be an adult's game because only adults will remember it?

Frank I think that's part of it, and I think that the material is more adult-themed, the fact that it wasn't an animation, the story, what it was trying to say was pretty mature, computers having advanced since then – the younger generation at the time weren't so tied into computers – so I think that all those thing make *Tron* more appropriate for an adult audience than the single-digit audience.

PCF Do you think the distinctiveness of *Tron 2.0* will be an influence on other games?

Frank I think that *Tron* has these really strong elements that people are used to, and maybe even expect, but at the same time we experiment with new ways of how to present it, with new mechanics of how you deal with the things that people are familiar with. We're walking a fine line between safe and risky, and we're taking baby steps. I like to think that we didn't take the easy road, and tried to make something that was unique, fresh, something that people might not realise was new or unique, but something that was just fun and engaging and then at the end they'd realise that it was different. We're not reinventing anything, it's just about trying to create something that's contextual to the *Tron* universe.

PCF Would you jump to work with Disney again?

Frank It's to do with the individuals at Disney who we were working with; they just flat-out trust us. It could have easily gone the other way, if one individual didn't trust us it could have been a totally different experience. Because the people there trust Monolith, because of our track record, and they liked the stuff that we were showing them, there was never a moment when they had to step in

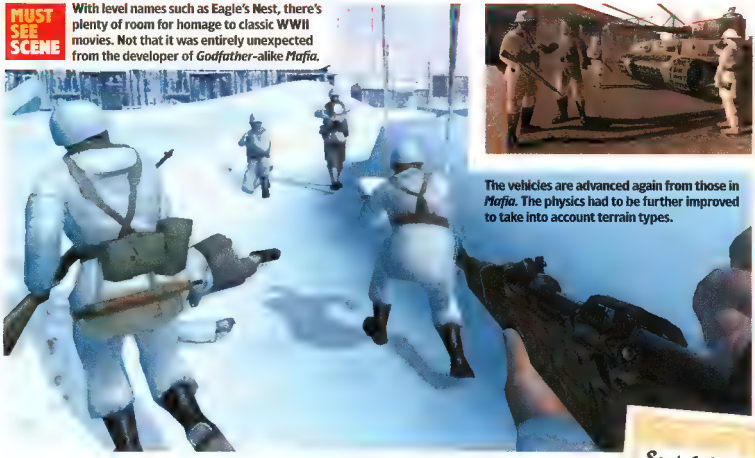


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MUST SEE SCENE With level names such as Eagle's Nest, there's plenty of room for homage to classic WWII movies. Not that it was entirely unexpected from the developer of *Godfather*-alike *Mafia*.

The vehicles are advanced again from those in *Mafia*. The physics had to be further improved to take into account terrain types.

PRESS PASS?

PCFormat hacks the hyperbole into consistency.



THEY SAY

LIFE-LIKE "Tension mounts as the game plunges players in a true-to-life combat zone created through sophisticated motion capture animation, dynamic lighting and shadows, and highly realistic character movement."

WE SAY

LOOK-A-LIKE It's very polished but there's a lot of WWII games at the moment, and given the inclusion of *Mafia*-style vehicles may not set *H&D2* apart from the crowd.

Sept 2003

↘ FIRST/THIRD-PERSON SHOOTER

HIDDEN & DANGEROUS 2

Normally overt and harmless, Adam Oxford camouflages up for the WWII shooter sequel.

DEVELOPER
ILLUSION SOFTWORKS

PUBLISHER:
GODTAKE 2 INTERACTIVE
WWW.HIDDEN-AND-DANGEROUS.COM
01753 496600



Lukas Kure, producer of *Hidden & Dangerous 2*.

WHO IS ILLUSION? Illusion is the most prolific developer in the Czech Republic right now. Comparisons can be drawn with the likes of Valve Software, because it debuted in 1999 with the enormously popular and innovative *Hidden & Dangerous*. Compared to Valve, however, Illusion is the embodiment of industry, having followed up *H&D* with the praiseworthy, if not quite as satisfying, *Flying Heroes*, *Mafia* and *Vietcong*.

WHAT IS IT DOING? The guys at Illusion are working hard to finish off *H&D2*, but still finding time to collaborate with other Prague-based developers on projects for different publishers. We also know that there are some unannounced games in the works, which should be revealed by the summer.

The first thing we notice about *Hidden & Dangerous 2* is that, despite the enormous number of WWII shooters out there, it's still instantly recognisable as *H&D*. Essentially a first- and third-person tactical shooter set in the Second World War, it's a long way advanced from the original in terms of looks and interface, but there's still something unique about it. What is different is the lack of bugs for which the original became notorious – but then *H&D* was so innovative it was easy to ignore the serious programming flaws, in fact, we thought they were rather endearing. But the marketing chap isn't amused when we ask if there's going to be a cheat mode to restore the, ahem, 'features' of the original – flying jeeps, troops who walk through doors, unplanned holes in the floor and so on – but producer Lukas Kure sees the funny side. "It's a good idea, but we probably won't do it. We want people to know how much the company has advanced since then" Killjoys.



A tram track tragedy. Now all we need is the sneering villain to come along with a length of rope.



A multiplayer co-op mode has been canned because the group size needed for missions varies too much.

Location, location

Enough frivolity. There are important facts you need to know. The structure should be familiar to all Tom Clancy fans. Read your briefing, pick a suitably talented and outfitted squad, work out a plan of attack, then complete your mission. You can switch between players and issue new orders as you progress, and most missions involve a dose of stealthy infiltration and covert operations as well as shoot-outs.

Apart from the spectacular 3D engine – the same one used for *Mafia* – the best thing about the game is the tactical view. Issuing orders can be done from the first-person view as in *Operation Flashpoint* – click on a location and action to send a squad member into the fray. For more control, though, the camera can be released to float away from the squad in the style of a 3D RTS. Complex orders – involving troops' state of awareness and aggression – are stacked into a totem and placed at a waypoint so the whole team can be moved gradually and with co-ordination into position.

A morale-ity

The realism and tension is bolstered by the power to take prisoners. The enemy AI – which Kure claims is the most advanced in any game – has a breaking point at which it either runs away or gives up. "There are many factors which affect enemy morale, including nationality. Let's just say the Italians don't fight to the death that often" Clever Italians, we say.

Set over seven locations, *H&D2* has lots going for it and there's no reason to suspect it won't live up to the acclaim of its predecessor. We'll know for sure later this year **PCF**

Sept 2003

MUST SEE SCENE **Andalusian skies: partly because one of the designers is Spanish and partly because the last game was better received in Europe than America, the first complete level is in Spain. In the final game, there will be more emphasis on railways across the globe than previously.**



The amount of detail in the landscapes is truly stunning, making *RT3* even more authentic.



DEVELOPER POPTOP

PUBLISHER: GATHERING
WWW.POPTOP.COM
01753 496600



Franz Felsl, lead designer.

WHO IS POPTOP? PopTop Software was created in 1998 and its first game was *Railroad Tycoon II*. As part of Gathering of Developers, the company was involved in collaboration on games by its stablemates, such as Triumph Studios' *Age of Wonders 2*. It's perhaps best known, however, for *Trapco*, the Caribbean island management game, which cast you as the tin-pot dictator of a banana republic.

WHAT IS IT DOING? Apart from *Railroad Tycoon 3*, PopTop hasn't announced that it's working on any more games. That doesn't mean the studio's about to close, just that it's very good at keeping secrets. Work has just finished on *Trapco 2*, though, which was developed by Frog City, again with input from the original team.

↘ MANAGEMENT

RAILROAD TYCOON 3

Adam Oxford's a-working on the railroad and letting off steam...

Back in the days before *Civilization*, Sid Meier and Microprose were best known for flight sims, tank sims and tactical wargames. The original *Railroad Tycoon*, designed by Meier and Bruce Shelley, marked the start of a new era for the company. Released in 1990, it pioneered the top-down, two-dimensional epic management and strategy style of *Civ* and *Colonisation*. And, along with *SimGolf*, it's the only Meier game not to involve combat, which may explain why he didn't follow up the franchise with a sequel.

Top popped

Instead, the honour of producing 1998's well received *Railroad Tycoon II* (*PCF* 90, 90 per cent) was taken by PopTop, who added a faux 3D perspective in the manner of *SimCity*. The fundamentals are still relatively unchanged: you are the eponymous tycoon in control of a railway company which you must expand to meet the transport needs of a nation as it changes from the early 19th century to the present day. As time passes, towns along your route spawn and develop, requiring more stations and services. By investing in other industries, you can stimulate demand for your trains and affect the way areas develop.

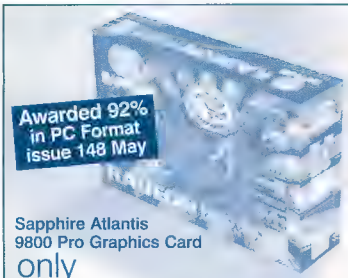
Countryside & line sense

The biggest change is the move to a 3D engine, and PopTop has done an incredible job. Entire countries are rendered on one map, with environs stretching from snow-topped peaks to desert tundra, all in spectacular detail. This isn't just a gimmick, though. "There are a lot of bad 3D strategy games," says PopTop's Franz Felsl. "We wanted to wait until the technology had evolved to the point where we were justified in re-presenting the game, and not just re-hashing it." So a town-building engine nearing the scale of *SimCity* is included, as are bridges – not possible before due to scaling issues. The new engine (arf) allows a more involving sense of authenticity while keeping the ease of play the last two games were famous for. For example, consists can be generated automatically, you just enter a few parameters. The only thing it can't do is build roads to make the urban areas totally realistic.

Railroad Tycoon 3 should generate a full head of steam when it sets out on its journey to release in the autumn. It combines the ruthless pursuit of capital with the romance of the railways to achieve mass appeal. If the 3D works as well as it did when we saw it, and doesn't fall prey to problems involving the wrong sort of chip on your graphics card, it will herald in a new era of management games that's as revolutionary as that which followed the original. **PCF**

When developing your railroad company, you can choose whether to specialise in passenger or coal transport.





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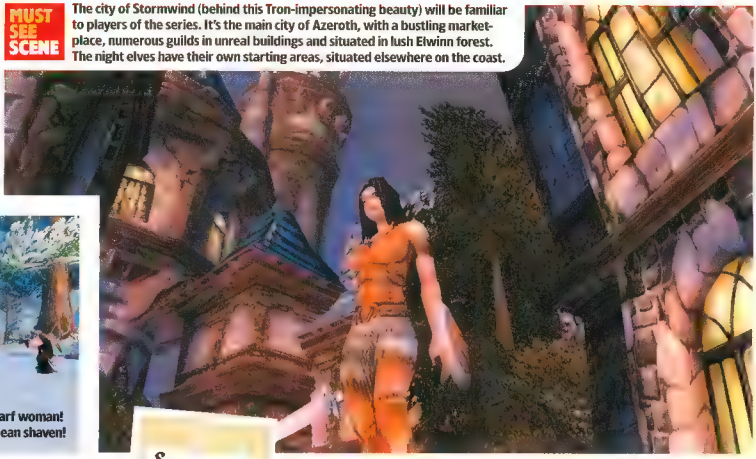
pcnextday not soft when it comes to hardware





Look! A dwarf woman! And she's clean shaven!

MUST SEE SCENE The city of Stormwind (behind this Tron-impersonating beauty) will be familiar to players of the series. It's the main city of Azeroth, with a bustling marketplace, numerous guilds in unreal buildings and situated in lush Elwinn forest. The night elves have their own starting areas, situated elsewhere on the coast.



Summer 04

DEVELOPER BLIZZARD ENTERTAINMENT

PUBLISHER VIVENDI UNIVERSAL
WWW.WORLDOFWARCRAFT.COM
0118 920 9100



Allen Adham, vice president of Blizzard.

WHO IS BLIZZARD? The developer needs no introduction. Apart from this. With headquarters in Irvine, California, Blizzard Entertainment was founded in 1991 under the name Silicon & Synapse by chairman Allen Adham, president Michael Morhaime and vice president Frank Pearce. As a three-man game team, their debut titles, *The Lost Vikings* and *Blackthorne*, are still famous. Since then they've developed some of the best-selling series of all time, from *Diablo* and *WarCraft* to *StarCraft*.

WHAT IS IT DOING? Blizzard is developing *World of WarCraft* and the expansion pack to its antecedent, *The Frozen Throne*. The latter continues from the plot of *Reign of Chaos*, following in the burning footsteps of the demon hunter Illidan as he seeks godhood. Blizzard is also co-operating on the production of *StarCraft: Ghost*, an RPG set in the *StarCraft* universe. *StarCraft* still enters the top 10 sellers from time to time, more than five years after its release.

↘ MMORPG

WORLD OF WARCRAFT

Amid orcs, dwarves and repulsive giants, the hideously ugly Dan Griliopoulos feels right at home. But is *WoW* well designed or just kobold together?

We're all different. It's a fact of life. We each have our own particular idiosyncrasies, quirks of feature or expressions that we, as children, would have taunted and bullied one another for. As mature adults, we've long since learned to accept and love these things in another human being as an expression of mother nature's beautiful and diverse creativity. That said, when an American says 'erb instead of nerb, it still cracks us up. We just can't help it – we're practically wetting ourselves as we sit on Blizzard's udder-like leather sofas.

We're with Allen Adham, vice president of the one of the biggest games companies worldwide, and we're sniggering behind our hands at his pronunciation, that also happens to be native to a good few hundred million people. God help us all. It's not even as if 'erbs are even particularly important to the game, but they are indicative of the philosophy guiding its development. Allen can't emphasise enough that, "In most massively multiplayer games, it seems like the designers have forgotten the most basic principles of good single-player RPGs. You don't want to just interact with monsters, but the world as well – open chests, barrels, collect 'erbs [snigger] from bushes. So quests tell you what you're going to get from doing them, the mini-map shows you where to go and so on"

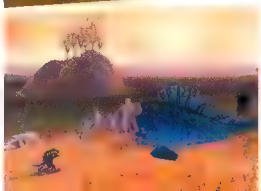
INSTANCE GRATIFICATION

It's a game within a game...

In *EverQuest* and its kin, a major flaw that developed over the years was item-camping. A powerful hero or group of heroes would squat on the respawn point of a monster that carried a rare item and monopolise the supply of that item. Blizzard's team, spotting this flaw, has developed a unique solution – elements of the game have become almost single-player.

An 'instance' occurs when you enter the lair of a particularly powerful monster. Depending if you're on your own, with a party or with your entire guild, the server creates an instance of the area that only you and your allies can access – non-allies attempting to enter the area have their own instance created. By this method, nobody ends up cornering the market in any goods.



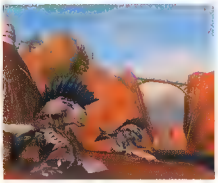


'Erb-an warrior

Every person gets to choose their character's race from tauren, orc, human or dwarf (night elves may be included as well), along with their appearance and character class, although the actual character selection interface is still in development. However, unlike other MMORPGs, where you're only mildly constrained as to how you develop your character, *WoW* sets down exactly what primary skills each class begins with. These will then develop automatically as you use them. So, for example, hunter characters have animal-taming and tracking skills while a warrior has weapon and armour skills and a shaman has mushroom-consumption skills and the ability to carry off wearing a large bone through the nose (we presume). Whichever



Harvest golems are like evil Wurzel Gummidges, soulessly searching for Aunt Sally.



The murgols are corrupted murlocks from *WarCraft III*.

class players choose, each has four basic characteristics derived from *WarCraft III* strength, agility, intellect and spirit. The warrior class can wear any armour and use any weapon, but only has minor powers that regenerate over a period of time, up to a day. Mages have five different casting classes: holy, fire, frost, nature and shadow. Shamans are a sort of bad-all-round paladin class that vary from race to race, such as an orc shaman or a night elf druid. Then there's the hunter class that can track animals. Hunters can also tame and train animals, and these then develop alongside the character, learning skills. There are also mounts, which higher-level characters can buy and learn to ride – horses for humans, wolves for orcs.

Hence the herbs. We see a dwarf hunter wander up to an NPC trainer and trade in some experience points for training in a new secondary skill – herbalism. (There are many others, such as tailoring, blacksmithing, riding and swimming.) Now when he wanders the world and he sees herb bushes popping up, he can use them, not just see them, as he has the ability to extract various herbs and berries. He can then sell these on to an alchemist or, if he's learned that skill too, mix up into potions and salves for his own use.

Welcome to my world

Adham reveals, "We first showed this about a month ago and the two responses we got were 'Oh my God, that looks fantastic' and 'There's no way that's all real gameplay'." We soon see it was. The areas we're shown are a mix of those from the *WarCraft* series and some new ones, and they're all seamlessly stitched together. The city of Stormwind leads on to Elwinn forest with nary a loading screen in sight, only a slow shift in textures and lighting.

Up a waterfall above Elwinn is the dwarven area of Loch Modan. "The more adventurous can even jump off that waterfall," says Allen. "I mean, they'll probably die when they hit the bottom, but it'll be a fun trip down." We also see an underwater shipwreck, complete with swimming undead sailors, the volcanic gothic glory of Blackrock Spire and an arena in the jungles of Azeroth.

True players

Arenas raise a question about player versus player in *WoW*, and the answer is reassuring: it will be there, but it's purely optional. There are certain well defined PVP areas, and the reward for taking part is access to the same items as everyone else, but with cosmetic differences. "A pure quest player may end up with a pink Care Bear tower shield, whereas a PVPer gets a black spiky one. We'll add in large monster tourneys later on, and there'll always be areas you can go to so you can join in battles."

Combat in these arenas is handled the same as anywhere else – click to initiate combat, then choose a selection of actions, buffs and spells from an action bar at the bottom of the screen. It has that typical Blizzard ease of use about it. Depending on your level and the level of the region you're in, hostile creatures either attack you on sight or ignore you.

There's much more we could say – about the ease of quests, the balance of map areas, about rare animals and the hundred mini-dungeons that dot the map – but there's not enough space, so you'll just have to sign up for the post-E3 beta. We certainly will. **PCF**

"We see a shipwreck, complete with swimming undead sailors..."



PRESS PASS?

Blizzard's PR team isn't resting on its laurels – it prefers a bed of feathers, or water. Or maybe nails.



THEY SAY

CRIBBS: Melding of MMO and RTS allows individuals or players to fully interact with each other in same world. Where is adventuring together vs fighting against each other in epic battles, players will form friendships, forge alliances and compete with one another for power and glory.

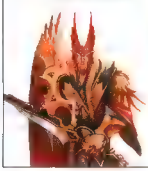
WE SAY

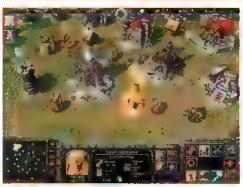
ANDY: The games have massive single-player scale and make it a game more enjoyable for the lone wolf, and the grouping advantages and voluntary PVP should make it good fun for the team-player too. The potential for players to ride mounts (which you can fight from) makes pack animals are summoned and dispelled at will seem so many existing MMORPGs.

THE FROZEN THRONE

Here's a sneak peek at the expansion to *WarCraft III*

We'll be looking in more depth soon, but *WarCraft III: The Frozen Throne* is shaping up well. We don't have the time to go into it fully, but here's a quick shufti at the saliva-draining new characters from it.

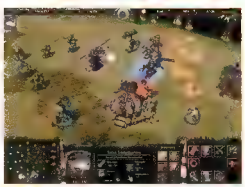




REIGN OF FIRE
The blood elves (humans) have a blood mage capable of raining fire and raising phoenixes. The orcs have a troll head-hunter, who conjures up snake wards (positionable turrets) and can chain heal, while the scourge have a pit lord, a heavily carapaced and monstrous fighter.



OLD NAGA
There aren't any new races in the multiplayer game, but one does appear in the single-player game: the evil naga, snake-people (of Indian myth) from the cold ocean depths, raised by the villainous demon hunter Illidan. They leave corruption everywhere they travel.



OUT OF THE FRYING PANDA
The most interesting of the new neutral characters is the Pandarline Brewmaster. Originally an April fool, he's been turned into a devastating creature capable of drunken fighting, intoxicating, fire breathing and splitting himself into three separate pandas. Which is a threat.

"BLURS THE DEMARCATION LINES BETWEEN GAMING AND POPULAR CULTURE"
THE GUARDIAN ★★★★★



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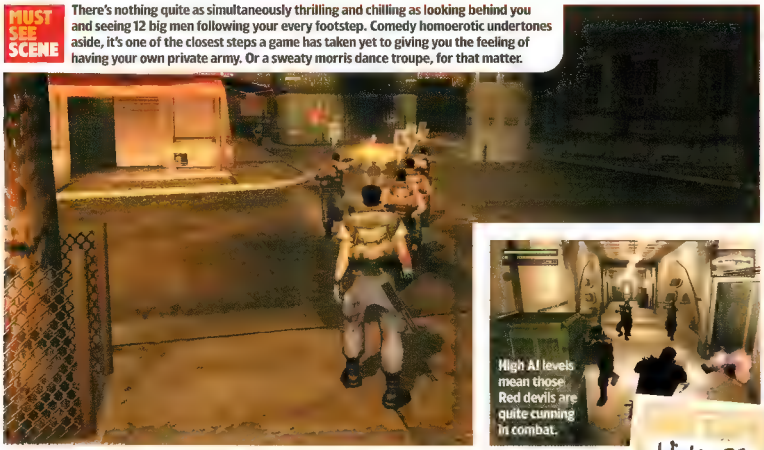
PC CD ROM

18

PlayStation.2

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MUST SEE SCENE **There's nothing quite as simultaneously thrilling and chilling as looking behind you and seeing 12 big men following your every footstep. Comedy homoerotic undertones aside, it's one of the closest steps a game has taken yet to giving you the feeling of having your own private army. Or a sweaty morris dance troupe, for that matter.**



PRESS PASS?
EA has kept fairly quiet about this little gem...



THEY SAY
PROPER GAMER: "There are two new squad leader classes, strategic fire-based attacks, tank combat, on-foot open-world missions, a levels system and an action mode that unlocks new weapons. There's fierce battles are won or lost."

WE SAY
PROPER GAMER: We're brilliant at shooting people in the face. If we're game enough to commit to Operation Flashpoint, and if our PC can survive the processing trauma...

ACTION-ADVENTURE

FREEDOM: SOLDIERS OF LIBERTY

The Soviet Union is invading! Kelly-Marie Dudley dons her fuzzy ushanka and tries to blend in with the natives.

After dazzling us with two sterling *Hitman* titles, we could be forgiven for believing that developer IO had disappeared with its bags of dosh into the Danish countryside. However, not content with its initial body count, it has handed out the weapons again for *Freedom: Soldiers of Liberty*.

The game is set in an alternative present day, where the Soviet Union triumphed in the Cold War and pressed its own big red button, annihilating Washington DC and any signs of government. The game's protagonist goes from mild-mannered good citizen to guns-blazing freedom fighter when Soviet forces invade New York and capture his brother. It's your mission to reclaim control of the streets of Manhattan with a band of guerrilla warriors.

Barney in the rubble

Your fully interactive battlefields are the streets of New York, which evolve over time and play an important part in your mission. You are encouraged to make use of rubble as cover and destroy buildings to hamper advancing forces. Multiplayer mode should be the gritty icing on the cake, with up to eight players grappling their way to victory.



Sniping from a height – successful combat requires full use of the city environment.



The action mode gives you the chance to capture resources for your growing army.

IO Interactive developer Martin Guldbaek hopes we'll all be drawn in by the thrill of an underdog victory, and draws a footballing analogy: "If you're playing in the first division, it isn't cool to beat a team from the third division. But if you do the opposite, go against the odds and accomplish the unexpected, only then do you feel the true rush of a hard won victory."

Your time is split between controlling troops from your underground base and taking to the streets in combat. Your only chance of seeing your brother again is to work your way up the ranks of the resistance, convert others to your cause and liberate the city. At least you don't have to rely entirely on your own gumption: "The AI in the game is quite believable," says Guldbaek. "For example, you see friendly and enemy soldiers making effective use of cover, ducking behind objects and peering around corners. The Red Army mounts co-ordinated assaults and your squad members take control of stationary machine guns to provide cover."



Fry those pesky Ruskies with their own weapons. Gawd bless America!

Take it as red

Charisma dictates the strengths and weaknesses of your forces. While victories keep them soldiering on, being surrounded by the corpses of their comrades weakens morale. Boosting charisma also helps your troops to develop from wimps into hardened killing machines, capable of handling heavier artillery and enduring more gunshots.

The current political climate has made the freedom fighter in vogue but *Freedom: Soldiers of Liberty* looks like more than a dedicated follower of fashion. Only play will tell if IO has mastered the art of rendering playable urban warfare. It'll be Molotov cocktails all round when this one hits the shelves. **PCF**

DEVELOPER
IO INTERACTIVE

PUBLISHER: EA
WWW.IOI.DK
01932 450000



Martin Guldbaek, head honcho level designer for the project.

WHO IS IO INTERACTIVE? Based in Copenhagen since 1998, IO Interactive first came to our attention for producing *Hitman: Codename 47* in 2000. The third-person shooter was a top seller on both PC and consoles with an equally successful sequel in 2002 based upon IO's Glacier graphics engine. Before it knew it, IO was scooping up BAFTAs and industry awards, inspiring it to get to work on its third major title, *Freedom: Soldiers of Liberty*.

WHAT IS IT DOING? There's no mention of a third outing for the bald assassinating wonder from Eidos. In fact, there's no news of any next title, possibly due to the pressure of the large shoes of *Hitman* that this title is hoping to fill, but we hope that IO will continue to churn out original, stylish, 3D action games until the cows come home.



PRESS PASS?

The revolution starts here...



THEY SAY

REVOLUTION "*Republic: The Revolution* delivers a unique and compelling experience powered by one of the most advanced graphics engines ever. The game takes place in the former Soviet Union's state of Novistrana, which gained independence in 1991."

WE SAY

CONVOLUTION Certainly a fresher prospect than any management game has offered in a long, long time, but *Republic* isn't quite as unique as once hoped. Also, the "zoom down to a lettuce leaf" hyperbole about the graphics engine is unfounded at this stage, although *Republic* does look lovely.

DEVELOPER

ELIXIR STUDIOS

PUBLISHER:
EIDOS INTERACTIVE
WWW.NOVISTRANA.COM
020 8363 3000



Demis Hassabis, founder of Elixir Studios.

WHO IS ELIXIR? Considering the pedigree of many of its team members, you'd be forgiven for being surprised that this is Elixir's first game. Its founder and figurehead Demis Hassabis co-created *Theme Park* when only 17, while other team members have been involved with *The Sims, Homeworld, Black & White, Dungeon Keeper 2, Colin McRae* and *Speedball 2*. Elixir may not have a game on the shelves yet, but it's certainly a developer to watch.

WHAT IS IT DOING? Since being formed in 1998, Elixir's only announced game is *Republic: The Revolution*, which has attracted considerable industry attention for its genre-busting aspects. Elixir also has an in-house R&D department that works on graphics and artificial intelligence – arguably the most important factors in game design.



MUST SEE SCENE

There's a hood in your 'hood, and he's been besmirching your good name. He needs to learn that you're not the soft touch he thinks you are – time for some intimidation techniques, then...

Progress enough and you can influence military commanders, adding tank assaults and such to your actions roster.



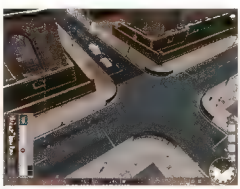
↘MANAGEMENT

REPUBLIC THE REVOLUTION

Unassuming Alec Meer has been called many things in his time, but pinko scum seems to be a favourite – making him the first choice to preview this communist-'em-up.

Talk about shock and awe. And so it is that we present to you the world's first cottaging sim. Rather than the is-it/isn't-it-a-game persistent world that *Republic* proffered this time last year, now it seems to be mostly concerned with meeting up with big men in dark alleys. There is definitely kissing involved. And the sharing of blood. *Republic* may be concerned with winning freedom for the people, but this is a little unexpected, to say the least.

It's all perfectly innocent, of course. After all, if you were running a campaign to overthrow a despotic government, wouldn't you want to meet your comrades somewhere relatively secret? The kissing is a sign of socialist respect, and the sharing of blood is the forging of a blood brother union with a comrade – just one way of keeping a comrade loyal to your cause.



The aftermath of the great Blazin' Squad versus So Solid Crew war wasn't pretty.

Loyal academy

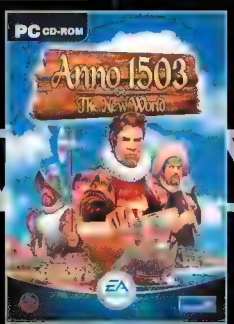
And if he doesn't stay loyal? Well, he may work against you, fail orders, join another faction or even report your more dubious methodologies to the relevant authorities. "Characters aren't just pawns for you to manipulate – they all have their own motivations," says Demis Hassabis, lead designer at developer Elixir. "If, for instance, you order a priest in your party to go and beat someone up, his resolve [commitment to you] will suffer." But we're barely listening, to be honest – we're still staggered to discover that *Republic* is, at last, now clearly a game. In some ways, it's a shame that, to a certain extent, it's buckled under the weight of its own ambition and bowed to convention, but at least it now has a specific, graspable appeal. "It's completely freeform, but we've signposted along the way a few things that the player should be doing," claims Hassabis. It's perhaps something of an understatement – while playing *Republic* will be a pleasingly complicated affair, you'll rarely be unsure of how to win.

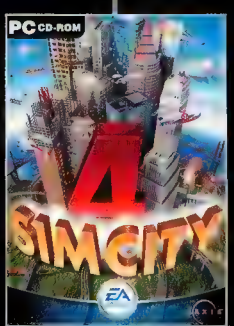
The end result in this pre-alpha build (we'll see the final beta at this year's E3, we're promised) could be cruelly described as *Theme Park* with freedom fighters and a lot of innovative twists. While we wouldn't use that description ourselves, it's also unlikely to be the totally new experience we'd hoped for. Using your recruited characters, you need to sway cities over to your cause through means both salubrious (such as rallies, charity work, billposters and persuasion) and nefarious – for instance, bribery, threats, violence and stitching up rivals. Of course, opposing factions are trying to do exactly the same, so it's important to keep an eye on the mean streets to spot what their agents are doing, and take appropriate action.

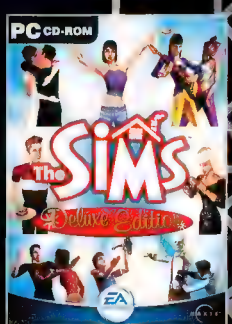
Reign fall

Genre-bending is still present in the RPG element of how you use your party of up to six members. If they perform well enough, their abilities improve and they have access to more 'actions' – events in the name of the party, such as organising a protest or beating up a troublemaker. They, and you, evolve according to what kind of action you tend to favour: you have a choice of money, influence and force actions, and the route you choose ultimately affects how you win the game. Will it be by a military coup, a people's uprising, or by forcing the corrupt president into resignation? Of course, if art imitates history, your subsequent reign will probably be an ever more sadistic mirroring of the last guy on the throne. Never underestimate the power of human nature. **PCF**

Visionaries wanted







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MUST SEE SCENE Real racers are too busy and professional to demonstrate much emotion on the track, but the Climax team has included many new rider animations to make you feel more involved.





DEVELOPER
CLIMAX

CLIMAX
PUBLISHER: THQ
WWW.THQ.COM
01483 767656



Peter Pimley – two wheels short of a tow truck.

WHO IS CLIMAX?
Climax is one of the UK's oldest and largest developers. It was founded in 1988 and now has studios in Solent, Brighton, London and Nottingham. The teams specialise in certain types of games, although when it came to *MotoGP*, Pimley admits that, "When THQ offered us the contract, we looked at the sport and thought, 'Oh, that looks like fun, haven't a clue what it is.' Now we all watch it religiously."

WHAT IS IT DOING?
The project list for a company with four studios that's always growing is too long to detail here, but of most interest to *PCF* readers is the massively multiplayer *Warhammer Online*, currently in development in the Nottingham studio.

↘ RACING

MOTOGP 2

June 2003

ULTIMATE RACING TECHNOLOGY

The game that made bike racing cool again is back. Adam Oxford straddles the saddle and lives the life of the leather-clad lunatic to find out what's new.

Confession time. I know very little about motorcyclists, outside of the writings of Hunter S Thompson, Robert M Pirsig and Richard O'Brien (the latter agreed with Mum and Dad that "yes, life is pretty cheap to that type"). I've seen the occasional race on *Grandstand* and even visited Mallory Park for the crazy shenanigans of 125cc racing once or twice, and God knows I've been cut up by packs of Sunday riders enough times to be intimately acquainted with most of the major tyre manufacturers' logos.

But, essentially, this is all I know about the joys of two-wheeled travel: four-cylinder touring bikes and black leather/denim are cool (especially in hot countries without helmet laws), whiny sports bikes and violent colour schemes are not. That and the fact they're cheaper to run and are arguably more environmentally-friendly than cars.



Bend the knees and try to roll with it – the only parachuting analogy in the game.

Taking up the slick

So why did *MotoGP* hook me, and why does it enchant even the most cylcophobic gamers? Why did it make us interested in the physics of front and back braking, crouching forward, leaning back and pulling ludicrous wheelies from the starting grid? Why did we suddenly care about Max Biaggi, Valentino Rossi and other exotically-named speed fiends? Well, it was damn well executed on the PC, with stunning graphics and captivating racing, and it was rocketed to popularity by being the first decent game for Xbox Live! This means that it shouldn't come as a complete surprise that less than a year later there's a sequel, developed by Climax, coming to a PC near you in less time than it takes to get a decent trackside hotdog. It's nicely timed to tie in with coverage of the real-life MotoGP season on BBC1 too.

More Moto

For the sequel, Climax has carefully enhanced rather than redesigned the original. The six tracks of the official championship that were missing from the game have been added, bringing the total to 16 circuits, all faithful to their real world counterparts from the 2002 season. Several of the tracks from *MotoGP 1* have also been revisited and redesigned from the original data, improving the accuracy of the tarmac and trackside locales.

Likewise, all the riders – on 500cc bikes at least – have been included. "It's practically as much again trackwise as there was in



LEARNING CURVES

Passing isn't just an overtaking manoeuvre in *MotoGP 2*.



Yes, it's true. The first time we booted up *MotoGP* we sat at the screen for about 10 hours straight, passing all of the tests as quickly as possible so that we could start the game proper with a 'perfect' bike with maximum acceleration, top speed, hardest braking and tightest handling . And then we wondered why the first season was so bloody easy for a novice. You still get better performance by completing training sessions successfully, but the experience is a smoother one now because they're interspersed throughout the career mode, rather than all available at once.

Other unlockable features include mirrored tracks, extra riders and the genuinely comical 'Bing a ding mode'. The main attraction of this particular feature is that the engine noises have been replaced by a bunch of clowns breathing helium and repeatedly crying "bing-a-ding-di-i-ng-ding-ding, bing-a-ding-ding-ding" in the manner of an accelerating bike. Absolutely classic.

MotoGP 1," explains Climax's Peter Pimley, who's showing us around a revamped Jerez. "The detail we've gone into on the track is so high that if we see the smallest thing on TV that we've missed, we really kick ourselves."

Heavy metal

The biggest change, though, reflects the alteration to the sport that took place at the beginning of the last season. The lightweight, screaming, two-stroke 500cc bikes are now joined in direct competition by their heavier, throatier, four-stroke 1,000cc brethren.

As in real life, these are slower to accelerate and heavier to turn than the nippy 500cc models, but they have a much faster top speed. The differences between the two types of bike are less pronounced in the game than they should be to prevent races from becoming too one-sided. Essentially, though, the larger bikes will be harder to handle, but once mastered they should dominate the track.

"We made the 1,000ccs less difficult to get round the track, but slowed them down a bit so that not everyone wanted to be Rossi," comments Pimley.

So that novices aren't completely overwhelmed, or perhaps just to keep them playing for a little longer, the litre-engined monsters will only be unlocked fairly late on in the career mode.

Graphic violence

The other major things that experienced *MotoGP*-ers will notice are the changes to the graphics engine. To be honest, they're fairly subtle, but once you know they're there, they are incredibly effective. Climax developers are proud of the work they've done to make the texture usage more efficient throughout the graphics pipeline, enabling them to use higher resolution throughout, without sacrificing framerate. This means that there's more realistic-looking tarmac, variation in the patches of roadside grass and extra detail on the riders' bikes and leathers.

"The main attraction of *MotoGP 2* is that it's going to be every bit as enjoyable for non-fans of the sport as the original"

Most impressive, however, is the way in which the bike models have been improved. Using a combination of in-house tools and a package called *Tessa* – a tessellation kit – the new bike models use fewer polygons than the old ones, but show more details, such as cut-out vents and sub-fairing engine models. The reason is that the original hi-poly models can carry more information for scaling over distance, reducing the amount of information needed for details and keeping things moving swiftly round the track. Artist Pete Butler explained that the team was surprised at the amount of detail it could get in. "With the first bike I did, I made it as detailed as possible, thinking we could use it as the high-res render and then knock a few bits off. In the end, we just put the whole thing in the game."

The main attraction of *MotoGP 2*, though, is that it's going to be every bit as enjoyable for non-fans of the sport as the original. While there are several new bike settings to tweak, it's still designed to gently ease you in rather than instantly demanding perfection.

"The thing about simulations is that they're fun for the developers and get you kudos points with the hardcore fans," says Pimley. "We wanted to give the options for the hardcore to make it sim-like if they wanted to, but the emphasis is on being able to put the disc in for the first time and off you go." **PCF**

PRESS PASS?

Will *MotoGP 2* roar [illegible] the line, or is it heading for a tumble?



THEY SAY

MOTOCROSS "All the adrenaline, camera-cam and pure fun of the 13 country, nine month, spectacular, team-fight to your Xbox, and PC, near the power, supercross-esque speed. Put your knees on the ground and race in a pack so tight that you could reach out and touch those who challenge you. With the most technologically advanced two-wheeled racing machines, the bravest jockeys and mind-blowing graphics, *MotoGP 2* is the racing thrill no self-respecting [illegible] fan can ignore."

WE SAY

MOTOCRASS "It's very similar to the first release, and so some of the new features may not be quite enough to tempt people back. It was completely understandable, but nevertheless fairly disappointing, to find that the main development focus is geared towards the Xbox version, but nevertheless we're looking forward to this racer in a new shape. Only speed freak, sweary idiots really should."

VIEW TO A SPILL

Getting the best camera angle to view [illegible] is like falling off a bike.



01 SLIDE ON
The all-new Crash cam swings into view whenever you take a tumble, giving everyone a more cinematic look at your embarrassing fall.



02 ZOOM LENS
Other improvements to the camera involve ditching the adherence to correctly placed TV cams. This means more dramatic close-ups throughout.



03 ACTION REPLAY
The auto edited replay also switches between views more intuitively, which should make the post-race analysis more enjoyable at least.

ARRESTING DEVELOPMENT

A look at the striking types that'll be tearing up your homies' turf in months to come

COLIN MCRAE RALLY 3

PUBLISHER CODEMASTERS



Now called a celebration of Ford's three years of working for Ford Rallye Sport, because the driver and team have parts keys in real life, *Colin 3* puts you back behind the wheel of the Ford Focus, racing across some of the most difficult terrain in the world. The Xbox version was as good as ever, hopefully the PC version will be the same.

THEY SAY Summer

WE SAY Review next issue

PROGRESS 90%

FIRE CHIEF

PUBLISHER MONTE CRISTO



While Monte's wanted list of new features didn't evolve a 'Strike' mode, in which you stand around braziers all day and plan posters, we remember a militant theme, or 'Closed Shop', where you only employ your mates, but the bulk of the game, we do know, is a *Commandos*-style squad setup in which you play the unlikeable leader trying to put out fires.

THEY SAY June

WE SAY Expect it on time

PROGRESS 90%

INDYCAR SERIES

PUBLISHER CODEMASTERS



OK, so Hayden Haskell is almost as popular as SARS and rabies on these shores, but before *Colin* and *TOCA*, who gave a monkey's about rally and touring car racing? If anyone can turn on European audiences to the quintessentially American sport we got to be the Codies.

THEY SAY Summer

WE SAY Within a month of the

PROGRESS 85%

SPACE COLONY

DEVELOPER FIREFLY



Having achieved success with strategy/city management game, Firefly has turned to the future. Using a Sims-style interface, you colonise alien worlds that range from fertile and resource-rich to barren and malevolent. Character dynamics play a big part, making it a cross between the claustrophobic drama of *Alien* and the comedy of *Red Dwarf*.

THEY SAY 2004

WE SAY One to watch out for

PROGRESS 30%

OPERATION FLASHPOINT 2

PUBLISHER CODEMASTERS



Here's an early shocker to be sorted: we expect to be talking a sequel to the ultra-realistic *Operation Flashpoint* is in the works at Prague based Bohemia Interactive. Progress so far isn't enormous (as you can tell from the unrevealing screenshot) but it's going to be published by Codemasters, so expect a full report next issue.

THEY SAY Late 2004

WE SAY We suspect it may slip

PROGRESS 20%



CHASER

No free pint included.

When the rest of us want to find ourselves, we spend six months in a hostel in Eastern Europe, fighting off the plague and experimenting with our sexuality. In 2044, the only option will be to wake up one morning on a space station during times of political turmoil and shoot your way to the truth. Your job is to keep John Chaser alive long enough to figure out why he's there and why those nasty men in black suits are shooting at him.

This much anticipated 3D shooter promises us expansive and beautifully rendered levels from the CloakNT engine and all the realistic weaponry we could want. We sincerely hope it isn't a cruel wind-up.

www.chasergame.com

Woman. Leather. 'Splodes. (Which is to say it has promise.)

AGE OF WONDERS: SHADOW MAGIC

Enter the third age of wonders, stage left.



It hasn't been ages since the last *Age of Wonders*, in fact, we reviewed *AoW2* just a year ago (PCF 138). Yet, Triumph Studios has announced it's working on a stand-alone semi-sequel to *Age of Wonders II*, using the same engine, called *Shadow Magic*. The storyline sees the world having developed a fear of magic, leading to the death of most wizards. Evil powers are at work, though, unleashing an alternative Shadow dimension – your job is to restore the popularity of the benevolent sorcerers.

The basics are the same – a blend of strategy and RPG to grow your empire. A few important things have been improved; notably the fact that enemies now surrender when overwhelmed.

www.ageofwonders2.com

ALT.GAMING

by Meer & Coplin

HALO!

DUKE AND LARA: IS IT ALL OVER?

GOSSIP EVOLVED

THE MASTER CHIEF SHOWS US AROUND HIS BEAUTIFUL HOME!

GUN OF THE SEASON! THE NEEDLER

COMING SOON...

Games and websites announced this month.

www.microsoft.com/games/ageofmythology/
If you enjoyed the free add-on for *AoM* this month, check out the news of a retail add-on.

www.st-ef2.com
This Enterprising website has dropped out of warp to reveal the facts to us.

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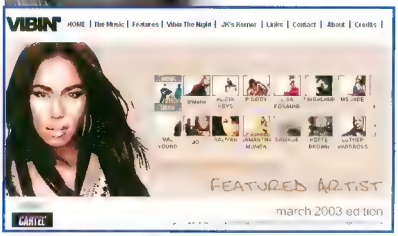
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↘ ACTION-ADVENTURE

GRAND THEFT AUTO VICE CITY

Alec Meer is not your lover, he's just some boy that tells you this is the one. But *Vice City* is *GTA*'s son. We dish the dirt in our exclusive review...

NEED TO KNOW
Price £30 **Publisher** Rockstar Games
Web www.rockstargames.com
Needs PII 800, 128Mb, 32Mb 3D card
Wants 1.6GHz P4, 256Mb, 64Mb 3D card
TIME TO COMPLETE 24 HOURS

Neon? Legwarmers? Michael Jackson? This isn't how most of us remember the eighties. But then a game which saw you cruise around a grimy provincial English town in a knackered Fiesta to the strains of The Smiths and The Cure – your mission, to persuade bigger kids to get you some Babycham from the local offy – simply wouldn't have the same commercial viability. (Nevertheless, in the spirit of nostalgia, we should create a special Vice City character – with a Morrissey quiff and frilly shirt; he could beat people to death with a bunch of daffodils. Bring on *Grand Theft Auto: Slough City*!)

But this game isn't being made to our vision, and rightly so. Some people were actually happy in the eighties, and it's for them – and by them – that *Grand Theft Auto: Vice City* has been developed. Them, and the global legions of budding sociopaths awakened by the phenomenal success of the truly ground-breaking *GTA3*. How, then, can developer/publisher Rockstar go one better than a game half the world thought was pretty much perfect?

Undercurrent affairs

The answer, of course, is to make exactly the same game, but honed, polished and improved in almost every conceivable way, no doubt thanks to that enormous pile of money earned from *GTA3*. You're unlikely to find a game with higher production values than this Vice City – a town where everything and everyone is beautiful, but crime, corruption, drugs and seedy sex make for a tar-black undercurrent beneath the oh-so-shiny surface – is like a JG Ballard novel made into a film by Brian de Palma. As in its predecessor, almost

YOUR FIRST HOUR Freedom | Sociopathic urban rampages | Michael Jackson's *Billie Jean* | Fiddly controls | *Owner of a Lonely Heart*

STICKING POINT

Defend a seaborne chum against the French army



BEAT IT!

TIMECODE About 15 hours

CHALLENGE Affable drug tsar Cortez is having to leave the neon environs of Vice City as he's got angry Europeans on his back. As a final favour for his help, it falls on you to grab a gun and annihilate the dozens of soldiers, boats and helicopters trying to wipe him – and you – out before he reaches safe harbour.

SOLUTION An impeccable aim and a fully-tooled arsenal, capable of taking down speedboats and choppers. Your best bet is to still have a minigun, taken from a helicopter in one of the early missions.



DON'T MISS THIS!

Leatherface, eat your grandfather's heart out...



WHAT IT IS That, you'll agree, is a chainsaw. You're a lumberjack and you're OK: you kill a) night and you maim all day. It's the most powerful melée weapon in the game, and it's worth seeing for when Tommy viciously drives it into the pavement, sparks and all, plunges it into a still-twitching corpse, and also for his comical, loping *Texas Chainsaw* run when he tries to sprint with it.

WHERE TO FIND IT Fairly near the start, in one of Cap'n Cortez's missions. It's yours to keep from then on and requires no refuelling, but if you're busted or wasted you lose it forever. Which at least gives you an incentive to complete the entire game without getting a criminal record or being hospitalised. As if it needed to be any harder.

anything goes: free-roaming killing frenzies are pretty much what you'd expected, although the limitations are starting to show now we're two years on from *GTA3*.

Realistically, there isn't anything you can do when you're not on a explicitly-goaled mission except kill people in a variety of interesting and brutal ways. Or drive around like grandma when she's had a few too many nips of the Christmas sherry. The whole 'living, breathing city' thing that we raved about a year ago is less convincing with distance. You can't talk to anyone except as part of pre-scripted dialogue during missions, you can't destroy anything except cars or people, and – one of *GTA3*'s most enduring problems – if you spot a car coming towards you then glance away, when you look back it will have disappeared. Permissible on PlayStation 2 perhaps, but when parts of this world simply cease to exist on a machine with 512Mb of memory, someone's telling porkies.

Palma violence

Still, nothing else comes close, and it all works beautifully; a stunning hybrid of gaming's most appealing genres. The world's not so much your oyster as your playground, where obscene levels of violence are a constitutional right. And even if the city is clearly machine rather than organism, at least it has character – something missing in the gloomy and anonymous environs of *GTA3*'s Liberty City. Apart from the (almost) cutting-edge technology powering the game, everything about it is infused with the eighties. Even the Rockstar logo at the start of the game recreates a Commodore 64 loading, while the sunset forever glows in unnatural hues of milkshake pink and buttercup yellow.

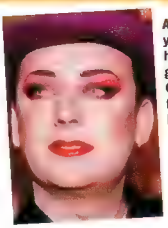
"Cocaine, murder and sex are the city's prime vices"

Everything looks so much brighter, more colourful and more detailed than in Liberty City, and this all-encompassing design ethic gives the whole game a more coherent feel. Meanwhile cocaine, murder and casual,

THE NON-PC PC

What makes *GTA: Vice City* different from its low-res, chuggy PS2 counterpart?

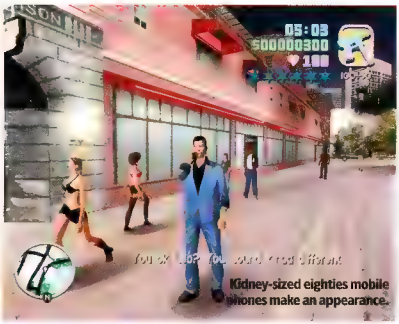
We've nattered about visual improvements already, but they are very pronounced – birds and planes fly overhead, the PS2's lack of texture detail is no longer obscured by motion trails, and it supports resolutions almost as high as your monitor and graphics card allow. It's not besieged by the performance problems of its predecessor, either.



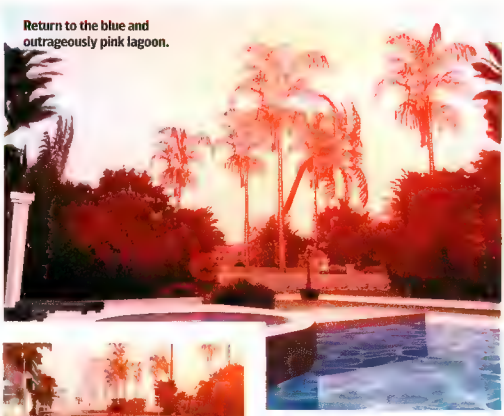
As in *GTA3*, character skinning is supported, so you can import yourself into the game and get the chance to see your puny, hermaphrodite self brawling. The eighties theme offers some great opportunities: imagine arranging drug deals as Boy George, performing illegal street races as Tony Hadley or fist-fighting with Cuban gun-runners when you're dressed up like David Bowie.

Media, dahling, media. And that means an MP3 radio station to fill up with your own eighties favourites (a miserable cocktail of Cure, Smiths and the Stone Roses for us). Also, an instant replay function enables you to save short AVI files of your most spectacular stunts or brutal gangland executions and email them to friends or shocked elderly relatives.





Kidney-sized eighties mobile phones make an appearance.


Return to the blue and outrageously pink lagoon.

INSIDE OUT

The doors, of perception and otherwise, all open...



How can a city be real if you can't go into any of the buildings? That was one big problem in *GTA3*, and it's been at least partially redressed in *Vice City*. You can now enter certain buildings, mostly ones that you own, to admire the mirrored floors and so on. But best of all, you can see the world continue to pass you by outside through the windows – a very tasty piece of design.

debauched sex are the city's prime vices – they're also the grimy ladders you use to become a kingpin of crime. That's the other big difference – whereas *GTA3* had you marked as an underdog for the duration, here you quickly become a [cough] player, more a leader than a lackey. If you can tear yourself away from random killings for long enough to complete the missions, you end up owning property all across town. This can be used to store cars, save your game and retreat to when the heat gets hot. You even have hired thugs and helipads, and you can buy businesses (strip clubs and porn studios for instance), which provide a steady income. There's an awful lot more crammed into this game than anything else that's gone before, even if we can't shake off the tiny, nagging voice of criticism (which sounds a bit like Anne Widdecombe) that we've heard this joke once before, and it's not quite as funny the second time around.

Mission position

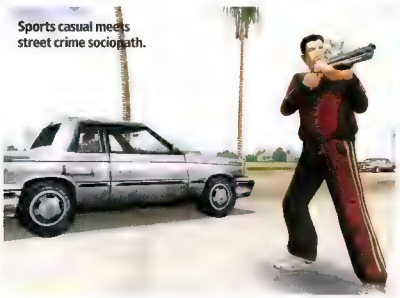
As before, the meat of the game is in the missions. They're essential to progress, to access more areas, vehicles and weapons, and just to keep your interest alive, because roaming a consequence-free environment can become pretty empty after a while. There's a less even balance of mission types than in *GTA3*, though – the occasionally tedious courier-type, race-against-time missions have been deemed less interesting than the action/shooting ones, which certainly makes the game much more filmic, but perhaps regrettably takes some of the emphasis off driving. But there's generally more variety – the inclusion of planes, helicopters and motorbikes requires you to learn several new skills and have a barrel of laughs while you're at it. Completing a mission is generally more complex, too – most are multi-objective, and the enemy AI is smarter. You now have to deal with police shooting your tyres out or sniping you through the windscreen as well as the chase, but at least you can do the same right back at their sorry khaki-clad derrieres. Partly thanks to the pure, evil, cheating bastardliness of the police/FBI/army, some of the missions are ludicrously tough, and might even deter you from finishing the game, but at least they're a true test of shooting and driving skill, as well as requiring an expert, eidetic knowledge of the entire city map.


He's on a road to nowhere – on the lam near the sunset beach of Vice City.

Then there's *Vice City*'s decision to introduce a lead character, rather than what was, in essence, little more than a pair of trousers with a funny haircut in *GTA3*. You are Tommy Vercetti, a wise-talking and frankly arrogant Italian-American ex-con out to make the city his. He talks back, he tells jokes, he argues and he befriends, rather than mutely having stuff happen around him. This is something of a doubled-edged sword, a mask with two faces, the sour with the sweet, the walrus with 40 noses. It's good to be important, but it's more important to be you, and Tommy's outrageous self-confidence makes him a little hard to connect with – it's now more like controlling a character than being one.

Cat and mouse

But having a voice is ultimately a boon, and a big factor in the incredibly cinematic detail of *Vice City*. It's full of other characters too (all voiced by celebs), and most of the music is riffs from 80s movies, music and TV – *Carlito's Way*, *Scarface* and *Miami Vice* are the most


Sports casual meets street crime sociopath.

WIND BENEATH MY WINGS

We got plane troubles in Vice City.

At last, we've been given the power of flight – a blessed relief after the crippled semi-plane that was *GTA3*'s Dodo. But the planes and especially the helicopters in *Vice City* are ridiculously hard to control – unless you set up a dual analogue gamepad or a decent joystick to use in-flight, you have to take a hunched position between the [W], [A], [S] and [D] keys, with the other hand gnarled around the number pad. It's uncomfortable and overly-difficult.





Motorbikes: back for the first time since the first *Grand Theft Auto*. Beautiful but deadly.



As you get richer, your clothes get smarter. And your coke habit gets worse, presumably.

PROVEN WITH STATISTICS

If you still don't believe us, just check out the figures...

2 3

9

20

40

120

8,000 Over-the-top effects

FAN SITES

GTA3 MODS

Sadly no longer being updated, but home to an enormous resource of mods, tweaks and add-ons for GTA3 (including a multiplayer mod) on PC, many of which should be applicable to Vice City with a bit of messing.

GTA VICE

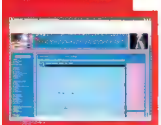
The ultimate fan site for *Vice City*, covering both the PlayStation 2 and PC release. Check here regularly for news on cheats, more screenshots and videos than you could ever need, once Vice City is released.

GTA FORUMS

Stuck on one of the missions? Want to show off how far you've got? Have an issue, bug or hidden package? Having technical problems? What the answers to these and many more questions about the Grand Theft Auto series have you ever wanted answering, or to...

KENT PARK'S NOSTALGIA ZONE

Designed as a tribute site for the game, this was home to one of *Vice City*'s most odious and memorable characters, sixty-odd owner Kent Paul, whose voice-acting is a genuine...



milked. The dialogue is fantastic, the sense of humour endlessly razor-sharp (we live for every moment when Luis Guzman's Napoleonic drug baron Ricardo accuses anyone in sight of being a dicknead "Dickheads! Dickheads everywhere!") and the appearance and even facial gestures of characters are cartoonishly well realised. It's that deliberately cartoon approach that really gives *Vice City* its character – throw all the photorealistic games at us you can find and we'll barely bat a derisive eyelid 'cos we're too busy revelling in the deliberately over-the-top look of this. It's the perfect justification for the game's staggeringly tasteless level of violence – this is *Tom and Jerry*, not *Straw Dogs*.

The port from PS2 to PC has meant a generous facelift, with higher resolutions and draw differences that make it one of the very best looking games around – the sheer amount of colour, visual diversity and terrain crammed into this seamless world more than makes up for the relative crudity of most of the models. It's a shame that it's confined to a tiny monitor – this is such a visually stunning, detail-packed game that you should seriously consider buying a home projector just to see it at its best. In fact, that's where the game fails the most on PC – the real joy of *Vice City* and *GTA3* is gathering a group of mates and some beers, and taking turns to perform the most outrageous stunts and horrific killing sprees. That's a problem with the platform rather than the game, but the lack of sociability does diminish its appeal somewhat. Fortunately, the PC's natural strengths improve *Vice City* immeasurably – those missions that took frustrating hours on PS2 (because trying to snipe someone with an analogue thumbstick is like trying to rewire a plug socket with a herring) take scant, satisfying seconds here, and make you feel so much more like the action anti-hero you're supposed to be. It may be six months old, but *Vice City* remains one of the essential games for any platform – everything here is bigger, better, brighter, faster, longer, sicker, cooler than the series has ever been before (and almost any other game you care to mention). If you spent months drowning in *GTA3* bliss, this game could go either way – you may be excited to the point of bodily leakage about its release, or you may have had your absolute fill of hit 'n' run fun. If you feel the series now needs something genuinely new to attract your highfalutin' attention all over again, feel free to axe a couple of points from the score. We really won't blame you for it. Alternatively, stop yer bloody moaning and get on with living one of the most expertly-realised games ever to grace this or any other shore. **PCF**

> **"The dialogue is fantastic, the sense of humour razor-sharp"**



The more Tommy sprints, the fitter he eventually gets – vital for fast getaways.



As in *GTA III*, cars, and their quality, differ according to where you are.

PCFormat rules

Great production values. Freedom and insane fun.

Unfortunately, it's not as fresh as it used to be.

HOW BUYING
Running and PS3 like...

BEST GAMING OPTION:
Anyone, all someone makes...

"With this kind of quality, who cares if it's too mass market?"

94%



Scary skeleton arms invoke fear in your captives and deter them from escaping.



Cut-scenes are yours to enjoy. Briefly.

MANAGEMENT

TROPICO 2 PIRATE COVE

Armed with only rum, a parrot and a comedy beard, Matt Avery prepares to try the totally *Tropico* taste.

NEED TO KNOW

Price £35 **Publisher** Gathering **Web** www.tropico2.com

Needs P3 500, 64Mb, 16Mb 3D card

Wants P4-2.0GHz 256Mb 64Mb 3D card

TIME TO COMPLETE

15 HOURS

Fans of the original *Tropico* lauded it for its detail and sense of humour, while detractors noted the oxymoronic constraints of playing as a despotic tyrant bound by clear social limitations. The sequel, set in and around the tranquil waters of the Caribbean, tasks you with choosing one from a selection of uninhabited islands and turning it into a piratical paradise through fair means and foul as you divide, conquer and generally bully your way to becoming a revered pirate king.

Let's get one thing straight from the outset – this is a management game of micro-orchestration; it's detailed, fiddly even, and wonderfully/frustratingly so depending on your inclination. What it's not is hands-on. Take, for example, the act of waging sea-borne war. Surely the raison d'être of piracy. You can build boats, research and manufacture an arsenal with which to equip them, recruct pirates, form allegiances with nation states, even set the parameters of patrolling and combat – but when the ships sail, they do so by remote control. If your preference is to sail the boats, explore the seas, command your troops and fight the battles, you'll be disappointed. If the minutiae of management, developing and implementing intricate chains of manufacture and balancing your needs with those of your followers is your bottle of grog, read on.

Sim-ple pleasures

Just as you have no direct ability to determine the actions (and thus the fate) of your fleet, so your populace cannot be directly controlled but must instead be cajoled, *Sims*-style, into helping you achieve your aims. The familiar hoops of resource gathering and manufacture are present and must be continually jumped through to satiate the needs of your minions. The challenges are of the *Settlers*-style post-engineered variety; to explore, you want to arm your pirates with cutlasses (at least), but to manufacture these you need to build an iron ore mine and a blacksmith. And to build these you need to gather lumber which must be harvested at a timber camp and processed at a sawmill, but to build these . You get the idea.

It can begin to feel like you're required to dig a hole just to fill it, though the interface is clear (if fiddly) and statisticians will have a field day because the value sets are exhaustive. You don't need all of them all the time, of course, but they do help you to quickly and effectively gauge the profitability of your outlets, the success of your sorties, and the contentment of your dependants, who fall into two distinct categories – pirates and captives. Both are crucial to long-term success and are, to a large extent, inter-dependent. Their needs, however, are pretty much diametrically opposed, requiring delicate balancing in all areas. Take, for example, anarchy and order. Pirates love the former. Captives need the latter. Too much of one and you'll lose the other. Or cause a riot anyway. Useful overlays provide information on

NAIL...

The last time we looked at *Tropico 2*...

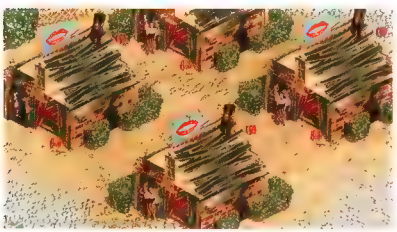


WE SAID

"It must be emphassed that this is first, last and everything in between a management game, and there are absolutely no concessions to other genres."

Oooh, we're good, aren't we? Though, to be fair, we didn't guess at the time just how limiting this approach would prove to be.

"Divide, conquer and bully your way to becoming a pirate king"



The prostitutes earn you money while keeping the pirates happy.

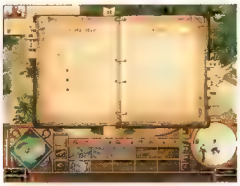


The stockade. Where wretched captives await your pleasure.

YOUR FIRST HOUR Humour Learning curve Monkeys Fiddly interface Pantomime voice-acting Lack of control



The campaign mode. It makes you feel good. It flirts with you. Try it.



Political machinations are well documented, though diplomacy implementation is severely limited.

the current levels of anarchy, fear and so on, and depict the effect placing island furniture will have on these levels before you commit yourself and your money. Balance, however, is crucial. Captives who gain sufficient courage try to escape, while pirates who become sufficiently disgruntled simply pick a fight with the nearest unfortunate, usually ending in the death of the latter. Not good.

Water palaver

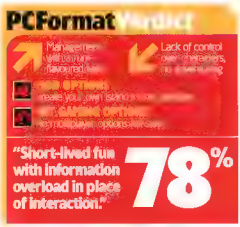
They also need to be fed, watered and entertained. Captives survive quite happily (or at least with quiet resignation) on water and corn chow from the chuck tent, and are content with the provision of a church. Pirates, on the other hand, enjoy gambling, drinking, womanising and sports of animal cruelty. So, not exactly PC then (albeit probably historically accurate), although there are concessions to equality in the shape of female pirates among your 'hearties' (again, factually accurate, and indeed the game enables you to select a real pirate as your character, complete with statistical strengths and weaknesses).

You need to erect gambling dens, bars and animal pits if you're to avoid a mutiny, with *Sims*-style icons appearing over your inhabitants' heads to relay their satisfaction with your island. Or lack of it. You also need to build brothels, which the male pirates visit in order to have their wicked way with the ladies of the all-hours, while the female pirates frequent the same establishments in order to enjoy a manicure and top up their preening rating. Nope, beats us, too. Roads are required to connect the civic structures, pirates must be provided with homes (to improve their sleep and stashing ratings) and further complication is added in the form of more senior pirates (captains, and those with sufficient experience) demanding better quality eateries, bars and the like, so you can never rest on your laurels.

Jolly rodgering

Thankfully the game has only two resources – lumber and cash – and both are readily available from the outset of most levels, though some islands provide fewer trees than others, while gold must be harvested from your enemies through raiding and pillaging, or by ransoming wealthy captives. A campaign of 15 levels provides a decent introduction to the main themes, while the Sandbox (read 'editor') provides adjustable parameters for key terrain features and a large list of playable pirates from which to choose – though, surprisingly, there is no option for random generation of islands, nor is there any scope for multiplayer frolics, making it feel rather limited. Which rather sums it up. **PCF**

PCFormat Verdict



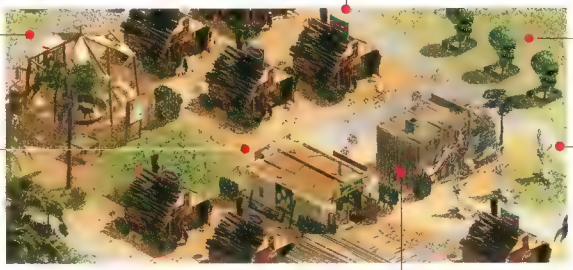
LOOSE DRINKING & HARD WOMEN

Finding your way around your island.

ANIMAL INSTINCT
The animal pit provides recreation for your bored, sadistic pirates.

LIP SERVICE
Brothels all sport these luscious lips signs. And women. We build hundreds on every map (purely for economic reasons, obviously).

SKULL-DUGGERY
Like the skeleton arms, these skull bushes also reassure your pirates and prove the existence of demented topiarists.



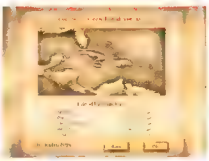
SMUGGLE UP
The Smuggler's Dive provides light refreshments to those with strong stomachs.

GAMBLE ON
This gambling den relieves pirates of their cash which, happily, goes straight into your coffers.

BONES OF CONTENTION
Erecting these scary skeleton arms raises the surrounding level of fear and keeps your captives in check.

ISLANDS R US

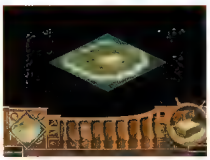
Creating a Caribbean island to crush underfoot has never been easier.



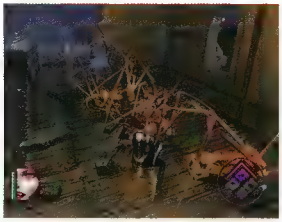
1 SAND AND DELIVER
In the Sandbox, first choose the location (make sure it's close to anywhere you fancy invading) and set five basic parameters.

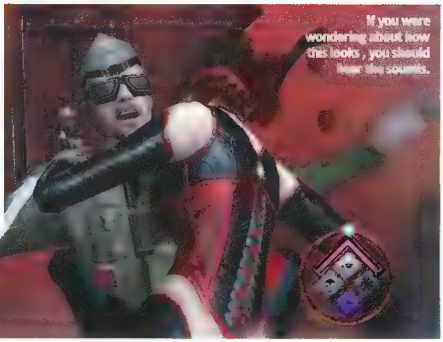


2 ROGUE TAX
Next, choose your favourite pirate from an extensive cast-list of villains and rogues. You're not limited to male characters, either.



3 SWAP SHOP
Finally you can save your Caribbean creation to swap with your friends (or even strangers online). And gloat.





These spiders, like everything else, can be hacked into wriggling, giggling, pieces.

DON'T MISS THIS!

Preaching to the perverted



WHAT IT IS Of the great bosses in this game, one of our particular favourites is the Klu Kux Klan-style occult Nazi priest. He preaches Aryan drivel from an armour-plated pulpit that whizzes up and down the aisle of his evil chapel, spraying bullets from the machine gun mounted on the front. Great stuff.

WHERE TO FIND IT The plot is so linear you'll have no trouble finding this nut's chapel in the secret Nazi base, about four hours into the game.

TURNING POINT

The Mother of all battles.



BEAT IT!

TIMECODE 50 minutes in

CHALLENGE The Mother of the Underworld is the first boss you meet, and she is huge: a gigantic, spidery thing on great long legs that actually spits out smaller spiders at you. They're only the size of cars. Try to run away, and she smashes whole ships apart to let her babies get at you.

SOLUTION Use the powerful shotgun hidden on a nearby island to blast off one of her legs. When she goes down, activate **Blood Rage** and hit her with everything you've got before she gets up again.

ACTION-ADVENTURE

BLOODRAYNE

It's rayning men, observes Tony Ellis. Well, pieces of them, anyway.

NEED TO KNOW

Price $30 **Publisher** Vivendi **Web** www.bloodrayne.com

Needs P733, 128Mb, 64Mb 3D card

Wants P4-2.53GHz, 512Mb, GeForce5 Ti 4600

TIME TO COMPLETE

25 HOURS

Let's see: we've got vampires, Nazis, Nazi zombies, fountains of gore, and a sexy kickass heroine in leather. Have we missed anything out? No, and neither has the developer *BloodRayne* is a jaw-droppingly unabashed attempt to put together a game out of the lowest common denominators in the business.

The lowest of these, if she'll pardon the slur, being Ms Rayne herself. You've seen the pictures, you know what we're talking about. Curvaceous, nacreously white female flesh, poured into a costume even a turn-of-the-century Parisian street harlot would only wear under something a little less revealing.

She is, needless to say, feisty (the red hair is something of a giveaway there), and a stylish killing machine (ditto the metre-long swordblades strapped to her arms). Oh, and she jiggles. She's also – and this is where it starts to get a little more interesting – a half-vampire. She can leap great distances, she has a number of special powers that are unlocked as the game progresses, and she can regenerate her health by draining the blood of the living. Or the undead, come to that. It's this, in particular, that elevates *BloodRayne* out of the morass of generic survival slash-'em-ups.

Whereas in most games getting healed is just an arcade-style process of collecting first aid kits and other power-ups, in *BloodRayne* it's part of your strategy. With no other means of getting your hit points back up, you soon learn the folly of massacring every enemy in sight and leaving no one alive to provide vitally-needed sustenance. And the way Rayne drains her victims, by wrapping her legs around their waists and making soft, moaning noises as she fastens her fangs on their throats, is vastly more fun than just picking up another white box with a red cross on the top.

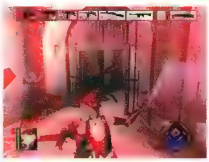
Armless fun

What else makes *BloodRayne* fun? Well, the incredible cascades of gore, for a start. Rayne doesn't just kill her victims, she slices them into cross-sections like a demonic sushi chef. Character models are highly deformable, and arms, legs, heads and indiscriminate pieces of torso all go flying in a spraying mist of blood that leaves every battlescene looking like aftermath of a bomb in a butcher's shop. It makes *Soldier of Fortune II* look about as radical as an episode of *TJ Hooker* in the violence stakes.

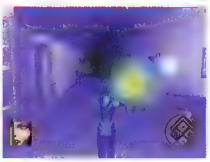
Yet because the gore is so insanely, impossibly over the top, it never feels as cold-bloodedly nasty as *SoFII*. The bits where you

SEEING RED...

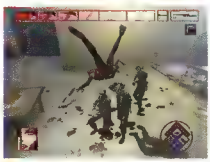
Or blue, possibly. Rayne has several enhanced modes she can activate.



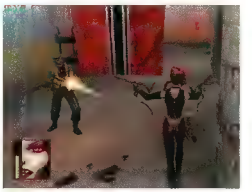
1 BLOOD RAGE
When Rayne hacks enough people to activate this mode, she gets stronger, more stylish attacks that send those body parts flying.



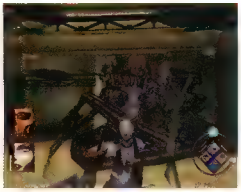
2 AURA SENSE
Your next goal is visible as a glowing light, even through walls. You can also see how much yummy health your enemies have to offer.



3 DILATED PERCEPTION
That's bullet-time. At this speed Rayne can dodge bullets, and outmanoeuvre dangerous enemies. Sheer poetry to watch.



Rayne takes damage from bullets, but can wield a gun in each hand herself.



A three-headed demon. There's a reason Rayne's running away in all these snaps.



He's a big man, but he's out of shape. Well several men. Soon to be several bits of men.

BLOOD SIMPLE

Up close, Rayne's twilight world isn't so hard to make sense of



RIFLE RANGE
You specify the category (light, heavy, special and so on), Rayne chooses which guns to wield.

A BIT OF LEG
Arms, legs and so on can all come off, depending on how frenzied your attack is.

SHEER CHEEKS
Play with Rayne for half an hour, and Lara Croft looks about as sexy as your gran.

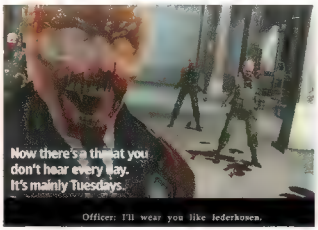
NETHER WORLD
Rayne's adventures take her far beyond Nazi bases, into demonic realms.

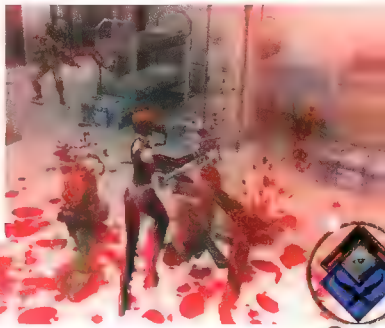
ANOTHER BIT OF LEG
Going one better than *SOFII*, limbs don't just come off, they come apart.

BLOODLUST
Blade attacks build this up, until Rayne can unleash ultra-violent Blood Rage mode.

slice someone's arm off and they run away from you screaming take a little getting used to, mind you

BloodRayne also has bullet-time, one of the first special skills to be unlocked. It's hardly original, but in a game where much of your fighting is done at close quarters, the inclusion is arguably more justifiable than it was in *Max Payne*. Character animation is very good, and bullet-time enables you to see Rayne's scissor-kicks, somersaults and swirling slices in all their glory, turning combat into a dreamlike, Grand Guignol ballet of spinning figures and sprays of blood. Tactically speaking, it can also come in very handy, especially when you're low on health and the odds are stacked against you.





"A dreamlike, Grand Guignol ballet of spinning figures and sprays of blood"

Lady and the vamp

This brings us to *BloodRayne*'s one real flaw. It's just too easy to stay alive. You're a vampire superhero with special powers, and whenever the going gets tough, you can slip into bullet-time mode or drain the nearest attacker to get your health back up. Exactly how hard do you think it is to slaughter your way through a secret base full of screaming Nazis? It's true that you can only save at the start of each level, which in another game might have been a pain in Rayne's taut, lace-clad backside, but because it's so easy to not become un-undead, this rarely becomes a factor. The situation isn't helped by the Objective Compass, which constantly points in the direction of your next goal. While it's good to always know where you should be heading, especially in a game with such sprawling levels, it does turn the experience into a no-brainer. If you find an elevator that needs a power supply, the compass immediately changes to tell you where you need to head to find a battery, and that's about as sophisticated as the puzzle-solving gets. You're simply led by the nose from point A to B to C.

Go directly to goal

This is not to say *BloodRayne* isn't challenging. The enemies do get tougher, with various undead and elite foes who can be hard or impossible to drain, while the many bosses invariably give you a run for your money. It's just that there's only ever one challenge: massacre your way through the level. So *BloodRayne* becomes a pretty much mindless slaughterfest, but it's executed with bags of visual flair. **PCF**

PCFormat Verdict

"Lively, mindless carnage, with wonderful visual excess."

76%

Blood Rage mode turbo-charges Rayne's combat skills – for a short time.



YOUR FIRST HOUR Draining zombies Dismembering spiders Rayne's outfit Intrusive cut-scenes Clunky dialogue Slow start



The snowy, mountainous landscapes get more impressive in the north.



Horsemen and archers become secondary to massed carls (not Jung).

LOOKING ELSEWHERE

WHERE ELSE HAS THE LONGBOAT BEEN?

>>PCF 37 **HEIMDALL 2** 38%
>>PCF 144 **AGE OF MYTHOLOGY** 88%
>>PCF 136 **CULTURES** 64%

FAN SITES

CLAN SHADES
www.shadesofwar.com/viking/viking.htm
Includes a short preview of the expansion, and useful short histories of the Vikings and the pre-medieval English.

KNIGHTS OF THE ROUND
http://members.shaw.ca/knights/round/Untitled-2.htm
A fan site with regularly updated news, but not much content beyond that. A good introduction to the state of the community though.

STRATEGY FOR TOTAL WAR
http://medieval.tactics.com
A rather ugly site but with a useful description of all the units in the main Medieval game, including a heavily subjective interpretation of their effectiveness.



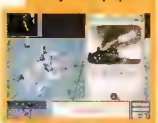
REAL-TIME STRATEGY

MEDIEVAL TOTAL WAR: THE VIKING INVASION

Dan Griliopoulos wanted to be the Hammer of the Gods but ended up the Mallet of the Mullets...

STICKING POINT

Get your name in the Sagas, without going on holiday with old people.



BEAT IT!

TIMECODE Two minutes

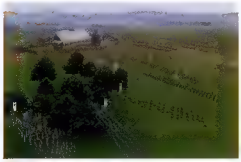
CHALLENGE Having selected the Vikings as your people, you now need to decide where to invade. You have outlandishly large armies your homeland can't support, but easy access to anywhere on the English mainland. Pictish Scotland is badly defended and ripe for plunder but it's unholdable, while the south of England, Southe Seve and Mercia are all wealthy and well tended.

SOLUTION Try a raiding tactic: attack a feeble area, such as the Orcades, with your whole army. The numbers of your troops should persuade the enemy to withdraw rather than fight, and you can then plunder to your heart's content. Now withdraw to another weakly defended area and repeat.

Admit it. Since you picked up your dad's paper and saw Hagar The Mildly Distasteful downing a bottle of some named-brand beer, you wanted to adopt the quaffing table manners, abrasive social skills and fascinating mating techniques of a Viking. Yet society (specifically the police) always stood in your way.

Fear no longer, young thralls. While *MTW TVI* is one of the more clumsy acronyms to have happened across our pages, it will fulfil all of your Nordic dreams (apart from the ones involving Ulrika and Sven) and put you on the path to Valhalla.

The bearded ones are certainly a worthy addition to the war – their era is a very different type of battle, all blood and tight shoulder-to-shoulder combat. It's much more reminiscent of *Shogun* than the original *Medieval*. The smaller, more cramped British Isles map also helps with this back to basics feel, and the extra units are a particularly bloody bunch. The only thing that's missing is the Valkyries carrying off your fallen troops.



Sieges don't last long on this scale.

NEED TO KNOW

Price $35 **Publisher** Activision
Web www.totalwar.com/community/viking.htm
Needs PII-350, 16Mb 3D card, 128Mb RAM. *Medieval Total War*
Wants PIII-1 GHz, 32Mb 3D card, 256Mb RAM

TIME TO COMPLETE
200 YEARS

Horny helmets

Each of the tribes gets its own selection of specialists, from the paltry Saxon Fyrdmen, Irish Dartmen and Viking Thralls to the Saxon Armoured Huscarles and the terrifyingly effective berserkers and Jomsvikings. The Vikings start the single-player game with a massive preponderance of force, and their access to boats enables them to ravage the shores with impunity. This is essential because their desolate homeland has no chance of supporting such a massive army, so they must pillage to survive.

There are several new units in other parts of the game and while it's testing to get to them, they rebalance the factions to make multiplayer that little bit fairer, and they revive single-player a little. There's also a gimmicky machine-gun called the organ gun, that's really a short-range, many-barrelled cannon.

The most important tweak isn't on the unit or building side, though – it's the in-your-face interface. Pre-battle sequences have been added, giving you a chance to organise your reinforcements and, if you have a spy in your opponent's region, see what your enemy's army looks like before you decide to go ahead. It adds a touch of Loki's cunning, and for the fan is definitely an essential addition.

The Viking Invasion is the archetypal expansion pack. It lengthens your enjoyment of the relevant oeuvre until the sequel comes out, at an acceptable price. It alters the dynamics of certain elements, adds a few more buildings and troops and gives an entire new era and map to work with, but changes the game just enough. If you've tired of *Medieval*, can't wait for *Rome* and the red thirst is descending, join the Vikings. **PCF**

PCFormat Verdict

- Altered game interface and new units
- Lack of instant interface change is disconcerting
- **MOD OPTIONS** Two are available: *Platform*
- **WET GAPING OPTIONS** Can be played over the internet

"Big, beardy, into rape and pillage? Think about therapy."

89%

YOUR FIRST HOUR New pre-battle interface · Big beards · Blood rage · Pointless main campaign additions · Unclear installation · The bloody English

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So peaceful – time to create some heretical chaos.



Isador the Inquisitor and the Monsters of Mistmare



No Matrix-style fight engine here

DON'T MISS THIS!

Although we'd like to pretend we're humbly serving the Lord, we really just want to capture some monsters and make them rumble with each other...



WHAT IT IS Once you have the Sharpness of Scythe, you may begin reaping beasts for your underling army. After equipping the weapon, your primary tool belt has six spaces designated solely for harvesting gems. Select a gem while battling a potential recruit and he's trapped within it, ready to report for duty.

WHERE TO FIND IT In Rome, after killing the Queen Rat in the catacombs, you return to the cathedral with your spoils. Make sure to go downstairs and raid the chests, where you find the Scythe. Now you can begin assembling your minions...

RPG ADVENTURE

MISTMARE

Nightmare creatures that can invade your brain? Kelly-Marie Dudley faces her demons

We're back in 1996. But rather than listening to the Spice Girls and being wary of New Labour, Great Britain and the vast majority of coastal Europe has long been abandoned. A sinister fog is descending over the planet, destroying everything in its path. The Roman Church has taken control of the few remaining cities on the continent, protecting them with a combination of liturgical magic and constant bell ringing (which irritates the hell out of fog monsters), in the hope that one day a hero may find the evil secret behind the fog. No, we don't remember it like that either.

NEED TO KNOW

Price $25 **Publisher** Mindscape
Web http://mistmare.anetr.be.com
Needs P733, 128Mb, 64Mb 3D card
Wants P4-2.53Ghz, 512Mb, GeForce5 Ti4600

TIME TO COMPLETE
25 HOURS

You control Isador, a young trainee plucked from Inquisitor college as one of the few known survivors of an encounter with the fog. You've been summoned to the Vatican to track down a traitor who's been labelled the anti-Christ on more than one occasion, as well as to prepare yourself physically and spiritually for that inevitable return to the fog which already has you quaking in your holy boots.

Peasant dreams

As a sideline to your crusading, you'll be called upon by the commoners to do a little cat-up-a-tree care in the community, usually for a reasonable reward. Although these missions are not compulsory, it's advantageous to get the townsfolk on your side.

The game is broken down into episodes, each of which has a time limit. Time plays a strange role – it stands still while you're strolling in the park or chatting in the pub, only to be cunningly reactivated when you do something constructive.

During time-sensitive missions, time-locking restricts your activities to ensure you stick to the routine and don't waste time doing unnecessary work. This makes the game frustratingly easy at points – after all, how much fun can you have raiding a city for fugitives if the only door you're allowed to break down is the right one?

The basic point-and-click controls are easy to master, although the camera controls can be tricky when trying to navigate in darker areas. Getting around can be quite a pleasant



In the cover of night, Isador could buy his copy of Razzle and enjoy it.



Kelly was quite surprised when Geoff turned up at reception

YOUR FIRST HOUR Dark atmosphere | Plenty of blasphemy | Lengthy dialogues | Lack of control



It's good, but it's no Sistine Chapel.



Words, words, words.

affair, though, as you immerse yourself in the beautiful landscapes. But life in this parallel universe is not quite as interactive as you'd like – Isador's strong moral character prevents you from rifling through things that aren't related to the mission, or even walking on the grass

Fog chorus

You have an arsenal of weapons at your disposal, both magical and standard-issue beating equipment. The military and church provide your basic training and you have the opportunity to learn Nordic, Oriental and Barbaric combat. Spiritual development enables you to hone your supernatural skills and create obliterating light shows that come in handy when you hit the fog. Your abilities are also determined by the decisions you make

HIGHER LEARNING

Rising antagonists, supernatural responses, learning, praise and plenty of hip



1 WARRIOR THINGS
Your first opponent is the mechanical warrior. Let the wookie win though – he's a sore loser at the best of times.



2 SO NEAR, SO SPAR
Once you can beat a tree, it's time to move on to sparring partners: some good, some bad, all ugly.



3 SHRINE ON
Don't forget to visit shrines for your spiritual growth – glowing orbs were all the rage before television, you know.



PROVEN WITH STATISTICS

The numbers that matter in Mistmare

- 3 Avatars of Isador
- 4 Schools to master
- 37 Spells and mantras
- 3 Realms in Mistmare
- 18 Realms to spell casting
- 0 Dependency on the power of Jesus

"Combat is only a point-and-click affair – most of it is done for you"

and the character you become – worth bearing in mind when given the option of murdering and pillaging

The most gratifying piece of weaponry is the Sharpness of Scythe, which enables you to capture the fiendish terrors of your nightmares and assemble a monster militia to fight alongside you

Holy unsuitable

By this point, you're bristling with anticipation to descend into battle and unleash your vengeance. Sadly, combat is only a point-and-click affair, and the hours spent wielding swords over the training dummy feel slightly wasted because most of the fighting is done for you. The struggle is learning to combine your fighting and magical styles to maximum effect, because few opponents are defeated with a little light battering. Still, they don't have the sharpest AI in the shed – figure out how to kill one Roman soldier and the rest fall in similar fashion.

The game is as engrossing as you want it to be. If you're impatient you can shun training, dialogue and the menial tasks of the peasantry to head straight to the haze for some sword-to-beast scuffling. But this makes the journey incredibly disorientating and throws any notions of a plotline out of the window. While the idea of a text-heavy adventure may seem unappealing, the result is a multi-layered and gloriously complex storyline that helps to compensate for all the time spent watching your unenthusiastic warfare unfold.

Mistmare's slow pace and dependency on dialogue steals the thunder from many of its fantasy elements. The gaping void created by lifeless confrontations has been patched up with a lot of attention to plot and atmosphere, but if you have a little bloodlust within, this simply may not be enough. **PCF**



An icy reception awaits those who fight the frost giants.

PCFormat Verdict

- Engrossing RPG with a genuine storyline
- Lack of freedom at times, a bit too linear
- Slow combat
- Only for the very patient
- NOT GAMING OPTIMUM
- Promises to impress, but ultimately it fails

"This is point and click heretic bashing at its most eerie."

73%



LOOKING ELSEWHERE

THEY DON'T MAKE THEM LIKE THIS ANY MORE PHEW, EH?

>>PCF128 **RED FACTION** 79%
>>PCF138 **DAIKATANA** 46%
>>PCF146 **UNREAL II** 71%




Why are most of your team buxom girlies with guns? Oh, you work it out.


Yes, there's a sequence with a helicopter. Not as exciting as it looks.

STICKING POINT

Banged-up in the slammer.



BEAT IT!

TIMECODE Three hours in

CHALLENGE *Half-Life* did it, *Deus Ex* did it, everyone's done it. It's the hoariest cliché in first-person shooterville and still *Devastation* insists on rehashing it. Just when you think you have a nice collection of weapons, you get captured and wake up in a grotty prison cell. No more guns. Why didn't they just kill you? Shhh, you'll spoil the suspension of disbelief.

SOLUTION A minor earth tremor (no, seriously) makes getting out of your cell a no-brainer. Getting out of the prison complex is trickier. Use a broken bottle or hunk of wood as a temporary weapon. Look out for switches to open the various levels and rescue your gamme new chum Duffy.

FIRST-PERSON SHOOTER

DEVASTATION

"Resistance breeds revolution," says the ad. "Familiarity breeds contempt," says **Tony Ellis.**

NEED TO KNOW

Price £35 **Publisher** NovaLogic
Web www.devastationgame.com

Needs PII-700, 256Mb, 32Mb 3D card
Wants P4-1GHz, 512Mb, 64Mb 3D card

TIME TO COMPLETE 20 HOURS

Just once, we'd like to see a game in which the international corporation is the good guy, and as a loyal employee with profit-share it's your job to kill the subversive, slogan-spraying urban guerrillas and their naive anti-capitalist ideology. Sadly, it's not this one. *Devastation* is very much a by-the-numbers dark future FPS. The corporation is evil, and you and your scruffy, machinegun-toting chums from the streets are out to destroy it. You know the drill. In fact, there are only two areas in which *Devastation* raises itself even remotely above the generic.

The level's in the detail

The first is the scenery. *Devastation* is powered by the new *Unreal* engine, and crikey, does it show. Every scene is crammed with polygon-rich detail: crisp packets on the floor, toolboxes, demijohns and spools of wire on shelves – and a surprising amount of this can be picked up or pushed around. The big, garish levels of *UT2003* and *Unreal II* are all very well, but if making convincingly lived-in looking urban scenery is any sort of yardstick to measure a 3D engine's capabilities, *Devastation* is the best showcase of *Unreal II* tech to date.

However, the realm of physics and collision detection is so over-engineered as to border on the farcical. Bottles roll noisily under foot. Crates, furniture and oil drums jostle when you walk into them. Or fall over. Or bump into other objects which then jostle in turn, in a chain-reaction of cause and effect. It's all very clever. The trouble is, all this happens if you so much as walk through a room. It's as though your character is six feet wide at the hips.

Some friendlies

The other unusual feature of *Devastation* is that it's a squad-based game. As in a Clancy-style tactical FPS, you have bot teammates and you can give them orders: attack, defend, hold and follow. Because they attack anything that moves, the difference between these modes can often seem a little Zen, but having other people on your side does make combat more interesting. The AI, however, is dated, the bad guys in particular reacting unrealistically.

But then, dated describes this FPS as a whole. The talking happens in cut-scenes, the plot leads you by the nose, the missions are nothing you haven't played a dozen times before. *Devastation* is so old-school it makes you want to dig out your Charlatans albums. But if all you want is a little mindless fun, you shouldn't have too many complaints. **PCF**

SPAWNY DEVILS

Great mysteries of gaming explained by science.

Many games respawn baddies. *Devastation* at least tries to make a virtue out of necessity by building it into the plot. The evil corporation, it seems, has created a nanotechnology cloning device, and it's this that churns out endless supplies of armed forces at certain points. When our urban heroes eventually capture a device of their own, it's presented as a great coup because, wait for it, they can use it to come back from the dead. The cynical might say that we already have a perfectly good Save/Load function for this kind of thing.





PCFormat Verdict

Full-on old-fashioned gun fun

Feeble AI, nothing new here

THE OPTIONS All the awesome power of the Unreal Engine

MY GAMING OPTIONS The usual: net and LAN options with 32 squads

"A second-class game running on a first-class engine."

68%

YOUR FIRST HOUR

Realistic clutter | Bot buddies | Constant action | Linear levels | Dumb AI | Cliché

Heroes wanted



Audition now

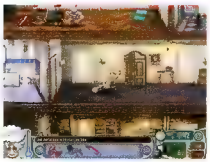
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v.03



Joe gurns away, happy in the corner, until the trick really gets knotty.



Being caught is not a pleasant experience, especially the third or fourth time.

LOOKING ELSEWHERE

OTHERS TO LOOK OUT FOR IN THE NEIGHBOURHOOD

>> **NO 13 MRS PENGE** NICE NEIGHBOUR, GOOD BISCUITS 90%

>> **NO 45 MR HUGHES** BIT GROUCHY, HAIRY LEGS 60%

>> **NO 77 MADAME BOVARY** MOROSE, BAD HAIR, TENDS TO FALL UNDER TRAINS 74%

PROVEN WITH STATISTICS

Pump up the volume, then see the sound's effects...

50 Decibels before your neighbours' runners start to twitch

100 Decibels before actual complaints

120 Decibels before they come round

160 Decibels before your neighbours' ears bleed when they're trapped in the hall



The menu screen gives a refreshing change.

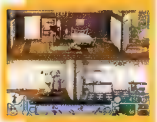
PUZZLE

NEIGHBOURS FROM HELL

He's been evicted from loads of flats for playing Celine Dion all night, so Dan Griliopoulos had to review this...

SICKENING POINT

Joe's a chip off the old block by the looks of it. Can you break his misanthropic heart?



BEAT IT!

TIMECODE Five minutes

CHALLENGE He loves his mother, does Joe. So, as it's her birthday, he's decided to make her some personal gifts. He's going to carve her a statue, make her a pot and send her a photo of himself to cheer her up. Meanwhile, the loney Woody decides to stymie Joe's filial endeavours by destroying all three of his homemade items.

SOLUTION Steal some flash powder and put it in the camera and Joe will be blinded. Fiddle with the potter's wheel and he's going to be battered. Finally, use the spanner from the downstairs drawer to loosen the nuts on his sculptor's stand and topple mom's statue, breaking it. Now that's entertainment.

Neighbours, eh? Banging bin lids throughout the night, moving fences, growing leylandii to block out your sunlight, stealing the cream from the top of milk bottles, committing genocide in Rwanda. Don't you wish that you could just go round and play a series of humorous japes on them before fleeing into the night?

No. You don't. Punishing your fellow human beings for their social inadequacy by entering their home covertly and causing them both psychological damage and actual physical pain is not an acceptable solution. Remember, they're people too. Despite this caveat, *Neighbours from Hell* (and, no, that's not a cockney Johnny Depp playing up to Kylie) achieves the rare distinction of being a game that promises tremendous amounts but fails to deliver.

NEED TO KNOW

Price $26 **Publisher** Jowood
Web www.neighbours-from-hell.com
Needs 64Mb
Wants 128Mb
TIME TO COMPLETE 3 HOURS

Go vest

You wear the clodhopping boots of Woody, a big-nosed, bequiffed, tanktop-wearing type who has been driven mad by his sociopath neighbour, Joe. His method of revenge is to go next door and, using items culled from his neighbour's furniture, anger the string vest-wearing Joe into cracking his own spine as he doubles back in anger.

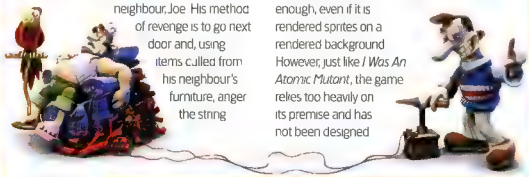
There also happens to be an audience watching Woody performing these wind-ups on Joe, and they want a certain number of tricks to happen in quick succession. If you're successful you'll be able move onto the next mission, and eventually onto the next season. There are three seasons in all, comprising about 20 missions.

Object poverty

Every single person who has was walked past this desk has asked "What's that?", so the game obviously looks and moves fetchingly enough, even if it is rendered sprites on a rendered background. However, just like *I Was An Atomic Mutant*, the game relies too heavily on its premise and has not been designed beyond it. There is only one house which, though it expands a little and has different interactive objects, is not enough to keep you interested. The objects themselves repeat through the seasons too, and if you've seen a reaction once, you're not really interested in seeing the comic effect again.

There's very little incentive to keep going once the difficulty level increases and your schemes get more spiteful. The number of larks you need to pull off goes up, and the time you have to do them goes down.

A show with a bearded midget or a big pink man (Beadle and Blobby, that is, not Alec and Adam) might have got away with this concept on the TV, but only due to variance of location and participant reaction. Without any variation at all, this game is buried beneath its own toppled leylandii. **PCF**



PCFormat verdict

More clay-style fun than a mud-wrestling bout

Less variation than watching Arvin Gerry

"It's one level feels less like hell and more like limbo."

48%

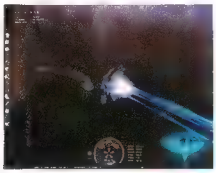
YOUR FIRST HOUR Claytastic animation · Austrian tanktops · Spine-cracking humour · The same four walls · Slapstick humour · Narrowed interactivity

MMORPG

EVE: THE SECOND GENESIS

Fed up with losing the plot? Get lost in space instead.

Twenty thousand years in the future and you're sitting all alone in the universe. Nothing there except you and your trusty mining laser. Whatever will you do? The *Eve* universe is huge, with thousands of solar systems all ready and waiting for you to explore. Featuring four different character races and a large selection of player skills, the possibilities are almost endless.



Combat frigates are ideal for clearing the route for your trade convoy.

NEED TO KNOW

Price $29.99 with monthly fee **Publisher** Crucial Entertainment **Web** www.eve-online.com

Needs 1GHz, 128Mb, 32Mb 3D card, 56K net connection

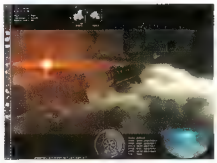
Wants 2GHz, 512Mb, 64Mb 3D card, broadband

Eve is a different kind of MMORPG, with no goblins, sewer rats or limitations as to what you can become. A highly polished interface, beautiful graphics and some amazing aural effects make the *Eve* universe a very pleasurable place to exist in. From your birth as a simple miner, you could become the CEO of a multi-national corporation, controlling systems and asteroid belts, or you could lead the life of a trader, hopping around the galaxy looking for the best prices for your wares.

Or how about a bounty hunter, hunting down those with a price on their head? A vast selection of commodities and ships are available, and with an ever-changing market, you could control supply and demand in certain areas by the mass production of items which are sorely needed. New skills can be bought and trained, and because *Eve* is set in real time, your character's skills can be enhanced while you're offline, which is handy because some skills can literally take weeks to level up.

Eve: The Second Genesis has enough content so early in its release to keep players occupied, and although it still has some bugs left over from beta, we can't help imagining the possibilities and scope of the game. *Eve* just keeps you coming back for more.

Andy McGregor



The Iteron Mark II, a Gallente Industrial, in the middle of a large-scale mining operation.

PCFormat Verdict

Great training system & depth of skills

Still buggy from beta

Lots of mining

"A fresh breath in the MMORPG genre. In some respects it's like on steroids."

83%

YOUR FIRST HOUR Space Mining Pirates Beautiful locations Economy Getting lost Long warp jumps Mining Pirates Death

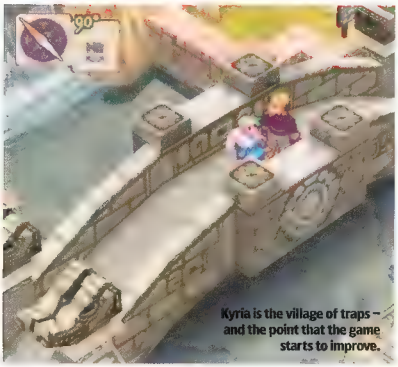


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Kyria is the village of traps – and the point that the game starts to improve.



Locations feel [illegible] cramped, especially [illegible] clumsy [illegible]

DON'T MISS THIS!

Tremble mortals, for god emperor Fou-Lu hath returned from his tomb with a quaking of the very Earth and the worst mock-English accent ever!



WHAT IT IS Throughout the game, your attention is split between the blue-haired Ryu and the mysterious white-haired Fou-Lu. As we all know male characters with white hair are always up to no good, but you spend much of the game controlling him and his amazing dragon-related abilities.

WHERE TO FIND IT Your first bout of tom-fou-lu-ryu (thank you) happens just a short way into the story, when the good guys first establish camp.

↘ROLEPLAYING

BREATH OF FIRE IV

A saga of dragon boys and naive winged girls. Richard Cobbett's not sure where he fits in...

Nanika tenkeiteki na Nihon no mono ga hoshii no desu ga but when you suddenly get hit in the face with an untranslated Japanese introduction, it's hard not to be thrown. What's more, we didn't put ours next to a set of seemingly unrelated images of blue-haired anime characters standing on clifftops, along with foaming monsters and flapping dragons.

Here be dragons

Luckily, like the other terrifyingly numbered RPGs to have made the crossover from console to PC, you don't need to have played any of the previous games to follow the story. You do, however, need patience. Lots and lots of patience. For a while, at least. The first few hours of the story offer nothing but banality – wandering around a bland desert landscapes fighting Silly Putty monsters and bumping into every cliché in the book. Lost princesses. Silent, amnesiac heroes. And, presumably as part of a cultural exchange program, a main character who speaks in thous, forsooths and



Combat is the normal turn-based system, with only a few minor twists.

NEED TO KNOW

Price $20 **Publisher** Capcom
Web www.capcom-europe.com

Needs P233, 64Mb, 8Mb 3D card
Wants PII -350, 64Mb, 16Mb 3D card

TIME TO COMPLETE
40 HOURS

the rest of Ye Mocke Dialect. Inspiring it is not, and the urge to stop playing isn't helped by a prehistoric engine which depicts the world as blurry, low-resolution sprites on rudimentary 3D backgrounds, repetitive combat against pathetic monsters scarcely worth the time it takes to slay them, and a general feeling that you've seen it all before.

Moderate balls of fire

Keep playing, however, and while it never matches the bar set by the genre's classics, enough pieces soon click into position to keep you interested. The combat begins to open up, with characters being juggled around on the fly, a variety of combo attacks to discover, and masters to impress with your skills in exchange for new skills. More importantly, the areas that you visit start displaying more sense of both life and imagination – a bland desert town giving way to a maze of rooftops above a cursed city and a village of booby-trap loving bumpkins, with more interesting characters signing up to the party. You rarely find yourself in trouble through a lack of time spent levelling up because the action starts easy, and scales up at a manageable pace, with plenty of mini-games and distractions scattered throughout.



Sorry, we'll respect you and your pyjamas once the sniggering stops.

the story *Breath of Fire 4* does have its charms, but ones that you are only likely to reach if you are a dedicated fan of the genre. There's little of *Final Fantasy's* confidence to jump-start your interest, and even *Grandia 2's* notoriously slow opening chapters have more zip. Get past this, and there's a decent, not to mention huge, adventure waiting for you – and one of the more satisfying console stars that have made the PC crossover. **PCF**

PCFormat Verdict

Entertaining and epic, when it gets going

Outdated engine, bland opening

MOD OPTIONS None included

NET GAMING None at all

"Not a breath of fresh air but as solid as your average metal gear for enthusiasts."

70%

YOUR FIRST HOUR Occasional comedy. Promise of improvement. Predicting the plot. Repetitive battles. Lack of freedom. Bland opening.

LOOKING ELSEWHERE

THE PLAYSTATION IS THE GENRE'S REAL HOME, BUT YOU CAN STILL TRACK DOWN

>>PCF 85 **FINAL FANTASY VII** 93%
>>PCF 106 **FINAL FANTASY VIII** 89%
>>PCF 135 **GRANDIA II** 79%

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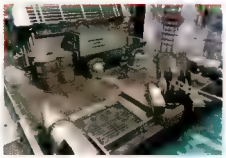
LOOKING ELSEWHERE

IF DINOSAUR CARNAGE IS YOUR THING, TRY...

>>PCF 94 **TUROK 2: SEEDS OF EVIL** 81%

>>PCF 111 **DINO CRISIS** 80%

>>PCF 147 **JURASSIC PARK: OPERATION GENESIS** 82%



Like all Essex boys, Dylan couldn't save the world without his souped-up Nova.



Dylan was going to regret trying to engage the T-Rex in a staring competition.

DON'T MISS THIS!

The T-Rex is the mother of all flesh shredders and he's intent on ripping you apart.



WHAT IT IS First spotted roaming about the abandoned military yard, none of your weaponry even scratches the beast. Laugh as he repeatedly outruns you, tosses you in the air and gleefully mangles your limbs.

WHERE TO FIND IT You meet the T-Rex throughout the game but don't worry – you'll eventually crawl away bleeding from your encounter when he loses interest. He'll be back, but hopefully by then you'll have more than a pocket knife and a pea shooter.



The explosive effects of the carnivorous diet you're about to be subjected.

ACTION-ADVENTURE

DINO CRISIS 2

Surrounded by scaly-skinned predators, Kelly-Marie Dudley regrets the day she walked into the *PCFormat* office.

Dinosaurs are notorious for getting games off shelves. There's something about stabbing at their scaly bodies we can't resist. Teamed with Capcom's knack of belting out atmospheric bloodbaths such as *Resident Evil*, we must be in for a treat, right?

The plot is familiar: having learnt nothing from their last dino-splicing episode, it's 2010 and the mysterious third energy researchers have had another slip-up. Edward City is no more and in its place we find a reptile-ridden jungle. Cue returning heroine Regina, accompanied by steroid pumped Dylan, to race scantily clad through the shrubbery and find out what happened while under constant attack from the Jurassic period's finest. Meanwhile, a trio of lady survivors in PVC and gimp masks appears intent on thwarting their plans.



Sunday massacre

After a barrage of cut-scenes, you can begin ripping apart the opposition. Massacres are rewarded with extinction points, which you can cash in to buy more artillery. Your score can be bolstered by *Street Fighter*-style combo moves, calculated by the number of dinos you can wipe out before they rip you a new novelty orifice.

NEED TO KNOW

Price £10 **Publisher** Capcom
Web www.capcom-europe.com
Needs P233, 64Mb, 8Mb 3D card
Wants PII-350, 128Mb, 16Mb 3D card

TIME TO COMPLETE 9 HOURS

Dino Crisis 2 shifted a bucketload of copies on the PlayStation and still handles like a console game. The controls are awkward on anything but a gamepad and the 'atmospheric' cinematics mean you're often obscured by attractive foliage while grappling with a lizardy opponent. Strangely, both the lithe Regina and her bulky male comrade handle identically.

Soil association

The flat-faced combatants received no pixellated surgery on their voyage from the console and remain static-faced throughout their B-movie one-liners. While the sexual tension is gripping, their inability to manoeuvre without looking as though they've soiled themselves proves that their relationship is going nowhere. Their dinosaur counterparts have faired a little better and look genuinely impressive as they chew limbs from your torso.

Overall, your opposition is minimal. Velociraptors come at you from every angle and then wait patiently for you to recover before attempting to attack, pretty much explaining why they're extinct. As the dinosaurs get bigger, the slaughter gets easier – conveniently placed flash cards give in-depth instructions on how to annihilate your foes long before you encounter them. Shoot, slash, kill – repeat as necessary. After an hour or so of repetitive slaughter and cut-scenes, you'll be yearning for a plot line or at least a whiff of the suspense that kept us glued to other Capcom titles.

The debate will rage on over the successes and failures of console to PC conversions. And those who believe that the PC gamer will always demand a little more substance for their money will be delighted with Capcom's reptilian offering to back up their argument. **PCF**

PCFormat verdict

Familiar format, lots of gratuitous scale bashing.

Simple, repetitive and much to like at

MOD OPTION: Nothing as yet.

NET GAMING OPTION: Really, nothing, but dino carnage is always fun.

"Familiar gory gaming that hasn't stood the test of time."

64%

YOUR FIRST HOUR: Dinosaurs | Tail whipping | Gore | Pathetic plot | Controls | Cheesy one-liners



The in-game graphics are rather less impressive than the intro sequences.

↘FLIGHT SIM

RED SHARK

Take your big chopper back in time. Please yerself...

Despite the conviction of modern science that time travel is a theoretical impossibility *[comments on this to usual address – Ed]*, we love the fact that science fiction never gives up on the idea. More to the point, we love the ways in which the heroes of sci-fi make their temporal journeys. Compared to HG Wells' bicycle, Doctor Who's phonebox and Marty McFly's ridiculous DeLorean, using a helicopter seems like a perfectly sane idea.

The premise behind *Red Shark* is that Russians scientists have equipped a KA-40 Red Shark chopper with a time-travelling device and sent it back to the Second World War in order to re-write history. The chapters you are exacting your non-artistic licence over are those which took place in the Soviet Union, the Eastern Front and North Africa. Don't expect a rotor-head sim, though, because things are played out from a locked third-person camera in the most arcadey style possible.

And this is the big problem with *Red Shark* as a game. The hokum storyline we can take with a pinch of salt, and the dated 3D engine is boring but not reprehensible – but the depressing repetitiveness of looking for a predesignated target, destroying it and moving on to the next one makes us long for the relatively joyous experience of old-style Soviet supermarket queues over this reputedly hi-tech shooter. It's certainly fun for a while. However, while the enemy AI isn't near sophisticated enough to give up in frustration at the repetitiveness of it all, it won't be long before you do.

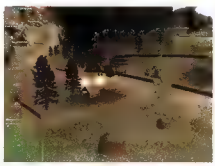
Mark Forbes

NEED TO KNOW

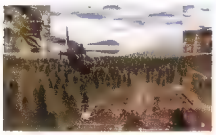
Price $20 **Publisher** G5 Software
Web www.redshark.g5software.com

Needs P350, 64Mb, 16Mb 3D card

Wants P500, 256Mb, 32Mb 3D card



Don't they know that smoking is really bad for their health?



If only Doctor Who had swapped his TARDIS for a helicopter...

PCFormat Verdict

Innovative plot, 3D engine peeps in!

Repetitive missions, lame AI

"Some nice 3D in places but ultimately *Red Shark* is unrewarding."

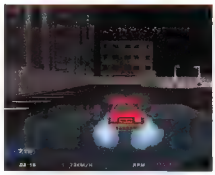
35%

YOUR FIRST HOUR Simple arcade-style gameplay | Repetitive missions

>>MOD REVIEWS

ON THE DVD

Game mods – what they are and how to get them



UNREALSPEED

For: *UT 2003*

We've seen similar mods on *Quake III* before now but this is the first of its kind for *UT2003*. *UnrealSpeed* morphs your favourite first-person shooter into a revved-up combat car racer complete with five custom-built maps and a slew of brilliantly modelled vehicles. The new 1.3 version features bot support but you need to find yourself a server to experience it at its best, something that should get much easier as this mod becomes more established.

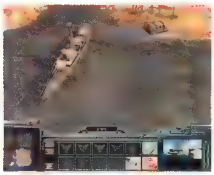
PCFormat Verdict

Four wheels and thrills

The bots are in but they need some work

"Still in its test drive stages but going through the gears."

76%



NEW TECH MOD

For: *C&C Generals*

New Tech adds several new units to your arsenal of destructive toys, including naval units. Each faction is given its own hovercraft transport and devastating sea-borne artillery in the form of battleships or, in the case of the GLA, a missile brandishing PT boat. All the new units are built at the War Factory, which stretches the imagination somewhat when it comes to landlocked battleships, but it's worth persevering for the multiplayer naval battles.

PCFormat Verdict

Superb missiles and new warfare

Third-party maps needed

"Needs a skipper to add polish but unmissable even now."

82%



KILLER COMMANDO

For: *Battlefield 1942*

Desert Combat might be stealing all the headlines in the *Battlefield1942* mod community but others are looking just as accomplished. *Killer Commando* doesn't have such lofty production values as its peers but it's full of wicked humour and imagination that proves refreshing in the current climate. It's pirates vs ninjas with monster trucks, Zeppelins and highly explosive cows – what more d'ya need?

PCFormat Verdict

Delicious off-the-wall humour

Few servers and currently only two maps

"Swap guns for swords and you might just fall yourself laughing."

70%



MASTER OF THE FORCE

For: *Jedi Knight 2*

The objective of this mod is to bring *Jedi Outcast* that bit closer to the movies by tweaking a number of its combat elements. Most significantly, we're treated to first-person view for saber combat. Plus there's an improved damage model that adds a number of new hit zones to target and a new dodge move that comes in handy because the mod also introduces lethal one-shot kill weaponry.

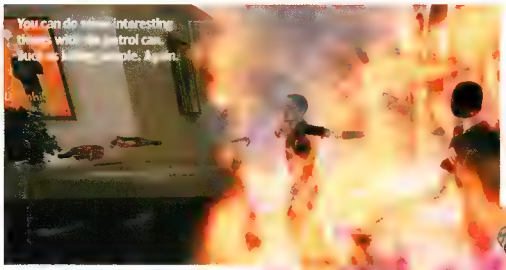
PCFormat Verdict

Dodge moves and insane up the skill

Not sure about first-person saber combat

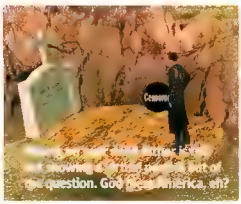
"The midi-chlorians are flowing but there's still much to learn."

73%











LOOKING ELSEWHERE

AND HERE'S HOW TO DO THIS SORT OF THING PROPERLY

>>PCF128 **DEUS EX** 94%
>>PCF132 **SERIOUS SAM: THE SECOND ENCOUNTER** 79%
>>PCF138 **GRAND THEFT AUTO III** 93%

DON'T MISS THIS!

It takes different strokes for different folks...



WHAT IT IS The developer obviously thinks of itself as hilarious, and it makes sure it beats you over the head with sledgehammer 'wit' at every opportunity. Look, it's Gary Coleman, from that crappy old 80s sitcom! And he speaks, too! Oh, there go my sides again.

WHERE TO FIND IT All over the place. Every billboard, book title, spoken comment and so on would put *Duke Nukem* to shame with the unk-headed attempts at social satire.

STICKING POINT

Go anywhere! Do anything you want! Sort of...



BEAT IT!

TIMECODE About 10 minutes

CHALLENGE As you go to pick up your pay cheque from Running With Scissors (for whom you work in the game), you're confronted with these protestors carrying their 'hilarious' signs. What to do? Kill them or let them be? Remember, it's only as violent as you are. Apparently.

SOLUTION It doesn't matter what you do. Even if you slaughter them, as soon as you pick up the cheque the office is besieged with more protestors who open fire on you.

ACTION-ADVENTURE

POSTAL 2

Mix extreme violence with racism and *Jackass* humour, and whaddaya get? Rich. Or, if you're Ed Ricketts, bored.

NEED TO KNOW

Price $25 **Publisher** Whiptail Interactive
Web www.gopostal.com/postal2
Needs PIII-733, 128Mb, 32Mb 3D card
Wants PIII-1.2GHz, 384Mb, 64Mb 3D card
TIME TO COMPLETE 15 HOURS

Oh lordy, another *GTA3* wannabe *Postal* kicked up a good deal of entirely expected fuss in the media when it was first released, and now a mere six years later we're doing it again, only this time in 3D.

Postal 2 is based on the idea that extreme violence is hilarious. Look, he's cut off her head with a shovel! Now she's lying on the floor spurting blood from her neck, while someone else kicks her dying body! Ha ha! Oh, my sides.

For gore's sake

Clearly, 12-year-old boys wearing Slipknot T-shirts will lap this stuff up. But just as an *Itchy & Scratchy* movie would wear thin within 10 minutes, such gore-porn soon gets yawnsome and you wonder where the game has gone.

Unfortunately, in its desperation to, like, really kick some ass in the complacent, like, mainstream culture, dude, the developer clearly doesn't play many games. Because *Postal 2* is as tedious as any *Halloween* sequel.

It's played over five weekdays, and each has you carrying out a number of menial tasks getting signatures for a petition, returning a library book, or unnating on your dead dad. (Yeah! Like, we are so damn out there!)

What generally happens is this: you travel to the destination, avoiding or killing people on the way. You wait in a queue for two or three minutes. You do the task, at which point a cut-scene pops up and a group of protestors/Muslims/whatever storms the area. There's a huge firefight, and from then on that group becomes your enemy. Rinse, wash, repeat.

Cell-out

Apart from playing with weapons and escaping from a police cell if you get caught, that's it. Only once, during a set-piece escape from a burning library, is the game vaguely gripping, otherwise, it's pretty much traipsing from A to B. The touted non-linearity boils down to whether or not you kill someone, and how.

The town of Paradise is huge and initially seems to offer lots of variety. Until you hit the load zones... Moving from one area to another, which happens too frequently, is excruciatingly slow, we timed one load at 86 seconds of sitting watching a bar inch across the screen. And while the textures are well done, character models are spindly and many of the interiors little more than a collection of right angles.

Postal 2 is offensive. Not because of its content, which is as calculated as a Benetton ad, but because of the developer's hypocrisy. Too timid to admit it's out to make a fast buck, it set itself up as a bastion of libertarianism, fighting the good fight against censorship.

Yeah right, lads. If you want to be the bad boys of PC gaming, have the courage of your conviction. And try making a more interesting game next time, eh? If you have a moment after all your grade-school iconoclasm. **PCF**

PCFormat Verdict

A stab (ha ha) at something different

By-the-numbers following-the-crowd content

"Seems cynically muck-raking but ultimately linear and repetitive."

52%

YOUR FIRST HOUR The big city | A whole mess o' weapons | The *Unreal* engine | Slow area loads | Painful attempts at humour | Everyone's perfect aim



This inter-village feud has gone too far.

↘ ONLINE SHOOTER

WORLD WAR II ONLINE BLITZKRIEG

Lightning war definitely strikes twice.

Two years into this mammoth massive multiplayer project, Cornered Rat Software has responded to a raucous forum and fixed a string of graphics glitches and gameplay downers. The result is a profound version overhaul (version 1.8.5 at the time of writing) and the birth of a WWII gaming odyssey par excellence.

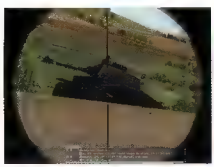
The game benefits from some recently enhanced scrub and plant detail as though the *Ground Force* team has done a makeover around all army bases, outposts and villages of strategic importance. It means you can be 10 feet from an enemy-armoured column before noticing. This kind of knee-level detail is something that even relatively confined first-person shooters don't manage – all the more impressive in a game that allows you to drive in a straight line for some eight real-time hours.

Modelled with real-world data, all the salient weapons of the period used by French, British and German forces are available. There's a range of pistols, rifles and sub-machine guns for the discerning marksman, grenades and sticky bombs for the sappers, seven variants of anti-tank and anti-aircraft guns, and loads of armoured fighting vehicles and aircraft.

NEED TO KNOW

Price £29.99 with one-month free subscription, then £8 per month **Publisher** Cornered Rat Software
Web www.wwiionline.com
Needs PIII-800, 512Mb, 64Mb 3D card, 56K modem
Wants PIII-1GHz broadband

You choose your tool and you get to work, operating within the confines of user-defined defence or assault missions. If you choose to concentrate on your rank, you can build points through mission successes and are rewarded with the ability to post ever more complicated missions. There is a complex resources engine at work behind the scenes and you might choose to earn a whole bunch of house points by towing an anti-tank gun to the next village on the back of your Bedford. The game encourages this kind of benevolent play by vigorously promoting team interaction through its omnipresent text chat box and clan or squad support, making *World War II Online: Blitzkreg* a superb community-based shooter. **Jason Bradbury**



Tip: the Panzer's weak point is its rear-mounted fuel tank.

PCFormat Verdict

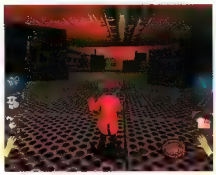
Squeaky-clean tactical possum | Driving 20 miles to the next village, start over

"There's no close community ties, *WWII Online* is a persistent world heavyweight." **90%**

YOUR FIRST HOUR Vehicles | Chat | Hauling ass | Resupplying

>>RE-RELEASES

Back again like a bad penny. But good.



MDK2

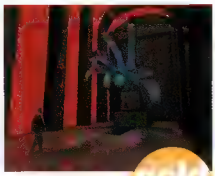
£5 Sold Out

Three years on and we still have no idea what MDK means. Only that it's a damn good excuse to take a mad scientist, his armour-clad right-hand janitor and a robotically modified canine on a part-puzzle, part-shoot-'em-up jaunt on a beautifully rendered alien landscape. While the graphics are showing their years, it hasn't gotten any easier and laugh-out-loud fart jokes will always stand the test of time.

PCFormat Verdict

Comic book cuteness with an edge | Slightly dated and really hard

"A welcome cute-genre caper that'll keep you smiling." **78%**



DEUS EX

£5 Sold Out

Format Gold

An unplayable, tedious mess of a game even at the time of release, the rapacious strains of age have done nothing for this braindead travesty's appeal, and only a half-blind ape with no sense of smell and a rectum for a face could possibly derive any enjoyment from *Deus Ex*. We are, of course, pulling your oh-so-simple leg. *Deus Ex* remains arguably the best PC game ever. You have 10 seconds to buy a copy. Nine. Eight. Seven.

PCFormat Verdict

Genre-bending game actually involving | Too many silly plastic leather coats, ugly

"With a sequel on its way, there's no finer time to revisit *Deus Ex*." **92%**



CARMAGEDDON TDR 2000

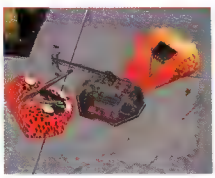
£5 Sold Out

After the ban-everything brigades of middle England had convinced us that the people at SCi could permanently warp our fragile minds, this pile of tosh rolled off its production line. While there's something pleasurable about the squelch of zombie brains on your axle, no amount of gratuitous carnage could compensate for exasperating gameplay.

PCFormat Verdict

Cool cars and limitless butchery | Too fiddly, slightly frustrating now

"Seen one car-combat game? Then you've seen the lot." **45%**



ROBOT WARS: ARENAS OF DESTRUCTION

£10 Favourites

Instead of selling their wives to fund a lawnmower with razor wheels, roboteers can now drag and drop to create their ultimate killing machine. After frantic key-pushing fails to prevent its destruction to a pile of metal filings, you can just throw it away. Just like the real thing, minus a leather-fringed scouser and overweight men with flea-infested beards.

PCFormat Verdict

You get to recreate smash in mice | But that's skylab can do

"Short-term mayhem and very little else." **55%**


PC CD-ROM







See your name in lights
and the rest of you
in the tabloids.





The Sims superstar
EXPANSION PACK

EA GAMES

EVERYTHING I KNOW, I LEARNT FROM GAMES



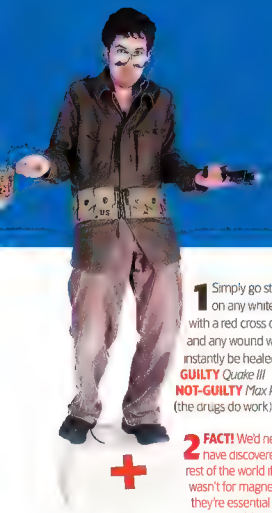
An alternative education for the nation, and one that got **Alec Meer** and **Dan Griliopoulos** where they are today
Have games really ever done anything good for us?

7 ...across several alien planets without any detrimental effect on your speed or health
GUILTY *Half-Life*
NOT-GUILTY *Halo*





Alec, less a hero, more a hobo.



1 Simply go stand idly on any white box with a red cross on it, and any wound will instantly be healed.
GUILTY *Quake III*
NOT-GUILTY *Max Payne* (the drugs do work)

2 **FACT!** We'd never have discovered the rest of the world if it wasn't for magnets – they're essential for navigation (*Civilization*).

Alec's package can heal all ills. Says Alec.

3 Saving the world is much easier when your enemies are prone to standing facing the wall next to a load of exploding barrels.
GUILTY *007 Nightfire*
NOT-GUILTY *Battlefield 1942*



4 While you might think green vials of liquid you've found in a basement would be something only the most committed urinophiles would drink, it does, in fact, heal you.
GUILTY *Neverwinter Nights*
NOT-GUILTY *Fallout*

5 **FACT!** Lowering a car's suspension by the width of a thumbnail can improve the lap time by as much as one second (*Geoff Crammond's Formula 1*)

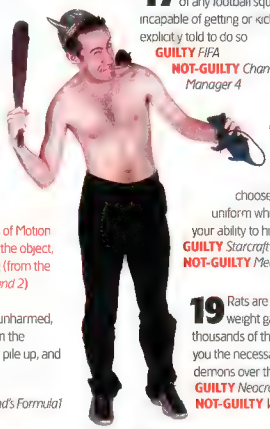
6 A man capable of beating a 20-foot alien to death with its own spleen is unable to kick down a simple wooden door.
GUILTY *Duke Nukem 3D*
NOT-GUILTY *Rainbow Six*

Dan likes to urinate whilst playing with his truncheon

8 **FACT!** Holding your breath improves your sniping accuracy (*Splinter Cell*). Taking diazepam helps steady your aim further (*Metal Gear Solid*). Running makes your shots far less accurate (*Operation Flashpoint*)

9 People don't mind if you break into their homes, and steal their possessions right in front of them.
GUILTY *Baldur's Gate*
NOT-GUILTY *Morrowind*

10 In the near future, all sport will cease to exist. We will have only televised death-games, in which the most violent wins
GUILTY *Speedball 2*
NOT-GUILTY *Championship Manager* (never recognises scientific progress)



11 **FACT!** Newton's Laws of Motion state that the heavier the object, the longer it will keep moving (from the spitting contest in *Monkey Island 2*)

12 It's possible to stride unharmed, Terminator-style, from the flaming wreckage of a 12-car pile up, and go on to win the race
GUILTY *TOCA*
NOT-GUILTY *Geoff Crammond's Formula 1*

13 **FACT!** The Coalition Abram tanks used in the recent Iraq war have a range of 3km – Iraqi tanks can only muster 1 km (*M1 Tank Platoon*)

[I'd just like to say; I've never been so humiliated in my life. – Dan]

15 Men armed with pop-guns can take down the biggest building or the toughest tank, as long as there are enough of them
GUILTY *Dune 2*
NOT-GUILTY *Black and White*

16 **FACT!** We learnt how to complete an electrical circuit when we got a finger trapped between the trackball and metal case of a *Missile Command* arcade game, and summarily received an electric shock

17 If you believe games, the 10 other members of any football squad are completely incapable of getting or kicking the ball unless explicitly told to do so
GUILTY *FIFA*
NOT-GUILTY *Championship Manager 4*

18 If your army chooses a sandy colour to blend in with the desert, the enemy chooses an outrageous blue uniform which still has no effect on your ability to hit them
GUILTY *Starcraft*
NOT-GUILTY *Medieval: Total War*

19 Rats are the fantasy substitute for weight gain formulas. Boshing thousands of them over the head gives you the necessary skills to bosh large demons over the head
GUILTY *Neocron*
NOT-GUILTY *World of WarCraft*



Jon threatened to shoot us if we used innuendos. With his big gun. Oooh...

20 **FACT!** The only British football team with a J in its name is St Johnstone (*Championship Manager*) **PCF**

It's like the YMCA. But with aged, asexual, atheists. That word 'like' is so flexible.



14 If someone dies, you can always build a new person who looks exactly the same. People are only matter, when it comes down to it
GUILTY *Command & Conquer*
NOT-GUILTY *Commandos*



Microsoft® Windows xp

FocusGuide
From the makers of **The Official Magazine**

Microsoft® Word



11 chapters of expert tips and advice

- **Get more from Microsoft Word 2002 today**
- Master smart formatting tips and tricks
- **Create sparkling documents (even Web pages!)**
- Integrate images and pictures
- **PLUS loads more!**

Complete version of MakePDF 3.2
Organise your files with QDOCS 1.0.61
Microsoft Office XP pack for Tablet PC and loads more!

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ISSUE 2 ON SALE 29 MAY
Windows XP: The Official Magazine

Tried&Tested

Gear/Gadgets/Apps/Utilities Definitive reviews



ALEC MEER JUNIOR STAFF WRITER

A HOBBIT'S TALE

Five feet and seven inches tall – that's how tall I am. I just wanted you to know that. It's important, if we are to continue this relationship. After all, if you can't handle being advised which kit to buy and which games to play by a man who is but seven inches shy of officially being categorised as a dwarf, you should probably stop reading now.

No, it's OK, I don't have a complex about it or anything, although there's room for a certain amount of psychological interpretation in my consistent hiding indoors playing with exciting technology and shooting make-believe monsters on my monitor. But I can do that safe in the knowledge that I'm part of a brother- and sisterhood of like-minded people who eschew our parents' generation's relentless ideals of having proactive, self-improvement hobbies in favour of tinkering with shiny digital stuff and getting involved with the future. Life: it's much better when you don't play sports.

alec.meer@futurenet.co.uk

HUSH MINI ITX

Quiet please! This totally fan-free PC doesn't need a fanfare to herald its entrance – with looks like these, we can't help but sit up and take notice. **p98**





102

Radeon 9600 Pro
ATI unleashes yet another 3D card – but can it stand the pace?



106

Evesham Evolution 20:20
To celebrate its 20th birthday, Evesham has given us a present.



109

iPAQ Pocket PC h5450
It's the best iPAQ yet, setting a new standard for PDAs



OUR TECH SPECS

1. PCF Labs
We've been reviewing kit in our labs for over a decade, and in that time have graded nearly 4,000 individual pieces of hardware, and looked at many, many more in features and tutorials.

2. The PCFormat Gold Award
Only when a piece of equipment exceeds our expectations in terms of innovation, excellence and value for money does it get one of these.

3. Buy it!
It's easy to spend a fortune updating your PC, but we pride ourselves on having an eye for a bargain. When we see one, we mark it with this.

4. We want to know what you think
We are PC fans writing for PC fans, so we want to know what you think. Tell us your thoughts in our forum, over at **forum.pcformat.co.uk**.

OUR SCORING SYSTEM

0-19% Unusable or astoundingly rubbish.
20-49% Largely ineffective and useless.
50-69% Some decent features but uninspiring.
70-79% Good kit without the must-have factor.
80-89% One of the best of its kind, but not the best.
90+ Outstanding. A PCFormat Gold Award winner.

In this month's T&T...

98 T&T CONVERGENCE
Where technologies come together like a big happy family

102 T&T GAMING
You know what all work and no play does to a man.

104 T&T MONITORS
They're the windows to your PC's soul.

106 T&T SYSTEMS
A pair of PCs placed head-to-head.

108 T&T MOBILE
Don't be tied to your desk: pick up thy kit and walk.

110 T&T UPGRADES
They're the computing equivalent of lipstick and mascara.

112 T&T SOFTWARE
Programs to help you use your PC to the full.

116 T&T SUPERTEST
Sixteen internal drives jostling for your attention.



Looking more like a DVD player than a PC, the Hush Mini ITX would look at home in anyone's living room.

HUSH MINI ITX

£595 Hush Technologies

So quiet and discreet, **Dan Griliopoulos'** brutalised lugholes can't even hear it. Is the Hush Mini ITX a sight for sore eyes and ears?

Hush little baby, don't you cry. Papa's gonna buy you a home entertainment system with associated peripherals. But which of the myriad mini cases to go for? Well, what do we want? A quiet, discreet, handsome box with massive functionality. And cheap. Never forget cheap.

This month's candidate for entertainment apotheosis is the Hush Mini ITX. From the pictures you can see she's a handsome minx, but you can't feel the quality, and especially the weight. It's designed to go in the lounge, presumably in a stack with all your other entertainment bobbins, so it's a lot more solid than a standard PC case to take the extra pressure, and is topped off with some modest hoary discs to prevent the smooth casing getting scratched. For a mini PC, this weighs as much as some normal desktops, partially due to this extra strength, but mainly due to the projections along the side.

Don't sweat it

These crinkle-cut edges may look as though the case has spent too long in the bath, but they're all part of Hush's cunning cooling plan. The little flanges serve to increase the surface area of the case, to dissipate heat faster with no moving parts. Inside the case, there are no fans, so other dissipatory mechanisms are needed, and the flanges and Hush's proprietary technology seem to do the job. Happily, the Via motherboard and processor quite happily operate at low temperatures, and we found that despite leaving the case running MP3s and DVDs all day in our stifling office, the case got no warmer than body heat.

The lack of fans also makes it quiet; but unlike certain other vendors who create a perfectly silent product, but then stick in cheap noisy CD/DVD or hard drives, church mice built the drives on the Hush, though the CD is still the loudest part of the machine. It's so quiet that even guru-of-the-mountains Geoff spent a good few minutes pressing the CD button, before he realised the computer was off.

"These crinkle-cut edges look as though the case has spent too long in the bath"

Sound and vision

However, there are notable deficiencies in the design as well – there's conspicuously no optical audio-out or TV-in. The former isn't such a problem, as long you have a SPDIF or standard analogue set of surround speakers. But the lack of a TV-in instantly stymies your PVR aspirations, meaning you'll need to use up that precious PCI slot with either a new graphics card (which wastes the excellent onboard graphics) or a TV tuner card (see the mini test in *PCF* 148) if you want to record stuff off the telly.

The lack of a bundled remote, or a location to install a remote receptor on the case front, is also irritating, because we don't appreciate leaving the little nest we've built on the sofa every time we want to change MP3. Again, one could be installed, but it'll spoil the unity of the design and take up more space inside.

Despite the glaring omissions in the content, we really can't fault the harmony of design. At a retail price of nearly £600 for the version we reviewed, it's certainly not cheap but, dammit, it's gorgeous. **PCF**

PCFormat Verdict

Discreet, stylish and solidly built

Lacking connectivity is a big problem for such a

"Ideal for fitting in with your IKEA home, even if it doesn't match the rest of your home entertainment system."

87%

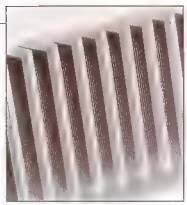
→Detail

CPU Via Nehemiah 933MHz
Graphics Onboard
Sound Onboard 5.1
RAM 256 PC2100
Hard disk 40Gb
Drives CD/DVD/CD-RW
Web www.hushtechnologies.net
Phone 01780 765368



NOT FINNED

Those crinkle-cut fringes help dissipate the heat generated by the low-powered chip; in fact, the whole case acts as an enormous heatsink. They also mean fewer moving parts, so less chance of any part of the PC breaking. However, Hush's claim of increased office health via fewer airborne-disease-spreading fans is a little suspect.





ANY PORT IN A STORM

Like any good media PC, the Hush has a selection of sockets round the back, but unlike our Shuttle friends, it doesn't have USB, FireWire and audio plugs on the front for hot swapping. You could argue that this PC looks more handsome without a row of ugly plugholes breaking up the front. Then again, a flip-cover with a few ports behind it wouldn't break up the design that much...

PICK 'N' MIX

Hush's website enables you to customise most bits of your PC: there are six colours to choose from, the hard drive can vary from 10Gb to 200Gb, and you can bosh the RAM up to a healthy 1Gb of PC2100.





RADEON AIW VE

£130 ATI www.ati.com

Reports of the PCI graphics card's demise have been exaggerated Various PCI GeForce4s are kicking about, and now this multimedia mongrel has slipped into our unAGPed motherboards Based around the ageing Radeon 7500 (comparable to a high-end GeForce2), it's hardly the ideal gaming card, although it can just about run the likes of *UT2003* The trouble is it hogs the PCI bus, so if you have a separate soundcard, you may hear stuttering as your machine tries use both On the upside, there's a TV tuner, DVD decoder and recording software included, so it's ideal for PVR in a small form factor system

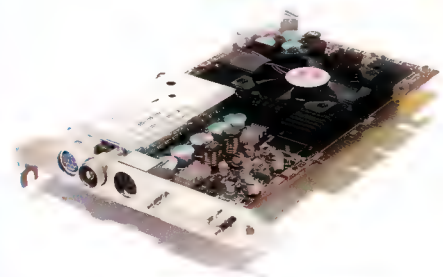
PCFormat Verdict

Connects via PCI, TV tuner

Connects via PCI, expensive

"A lot crammed in but it's pricey for its low performance."

78%



RADEON AIW 9700 PRO

£400 ATI www.ati.com

While nVIDIA works on removing the walrus-sized heatsink and fan from the FX 5800 Ultra, ATI has managed to cobble extra bits on to its slim and almost as powerful 9700 Pro So, while it's not quite the most powerful graphics card available, it is the most powerful card with a built-in TV tuner A slew of features makes it one of the best personal video recorder solutions money can buy, especially the *Videosoap* app that cleans blockiness and static from video signals. As a garishly-designed cherry on top, there's the same old AIW remote that's been doing the rounds for the last few iterations of the card but it's still a well realised escape from keyboard and mousage

PCFormat Verdict

9700 Pro chipset, features

A 5800 Pro (sans tuner) costs less

"A damn fine 3D card with spectacular PVR gubbins – but pricey."

88%



MUSTEK GSMART LCD43

£80 Mustek

Could this possibly be the world's first disposable digital camera? No.

We are living in an image-conscious age and Joe Q Consumer is used to having his gadgets both small and functional, particularly when it comes to digital cameras. Canon's Ixus pretty much set the agenda for tiny desirable cams, and manufacturers are always trying to go one better.

Well, Mustek has. The GSmart LCD3 is minuscule – roughly the same size as a packet of fags, but slightly shorter. There's a tiny lens, a tiny 1.5-inch LCD and several innocuous rubbery buttons. Also, with just one AA battery on board, it's incredibly light.

So, size is good. Image quality and features? Ah. Yes. Well. At this price you wouldn't expect much, but that's more than you get: bugger all. Well, not quite – there are three image quality settings to choose from, at least. The CMOS sensor is 2.1 megapixels, but in high-res mode the hardware interpolates up to 2,048 x 1,536, and does a pretty good job of it. Using the supplied software, you can also treat the GSmart as a rudimentary webcam.

However, there's no flash, and no other mode apart from point-and-click. The lens is fixed-focus and copes poorly with anything other than infinite distance shots. There's no way to upgrade the internal 16Mb Flash memory. The LCD is strikingly poor and picture quality is mediocre at best. Images are surprisingly clear given the naff lens, but the colours are dismal and unless you're in a very strong light, underexposure usually occurs.

In exactly the right conditions, you might be able to squeeze a few reasonable shots from the GSmart, but a 'real' budget camera would be cheaper and more flexible in the long run.

Ed Ricketts



→Detail

Resolutions 2,048 x 1,536, 1,600 x 1,200, 640 x 480
Sensor 2.1 megapixels CMOS
LCD 1.5-inch
Memory 16Mb Flash (internal)
Lens Fixed-focus, F2.8
Interface USB
Shutter speed 1/15–1/4000s
Extras 10-sec self-timer
Dimensions 72.5 x 62 x 19.9mm
Weight 62g
Web www.mustek.com
Phone 0800 072 1829

PCFormat Verdict

"It's incredibly small size and equally tiny price."

"Mediocre image quality, limited features and poor lens."

"Tiny, light and a cinch to use but, predictably, image quality and features are disappointing."

62%



STYLECAM GROOVE

£49.99 SiPix

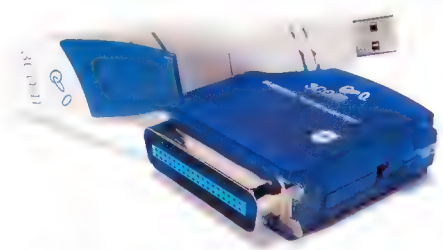
SiPix has successfully cornered the market for attracting feature-hungry buyers who love shiny things. The StyleCam Groove is shockingly attractive for a budget camera and operates with point-and-shoot ease. The prospect of getting a still camera, digital video camera, webcam, video conferencing camera and digital audio recorder for under £50 is very enticing until you realise how much the quality will suffer. Even the ALIVE (Advanced Living Image Via Enhancement) technology is not enough to produce print quality photos.

PCFormat Verdict

"Adaptable camera with lots of features."

"Cheap build and poor quality results."

58%



BLUETOOTH PRINTING KIT

£130 3Com www.3com.com

We want to like this. One of the first practical uses of Bluetooth we've seen, one part is a USB dongle that plugs into the back of your PC, enabling it to form or join a localised Bluetooth network. The other part plugs into the serial port of your printer so you can send documents to your printer without wires. The problem is that it's not totally wireless: you need to plug a power supply into the printer-side dongle. Given that Bluetooth's range is only a few metres, it's just trading one wire for another. At a cost. The idea is sound, though, and hopefully the next generation of printers will have Bluetooth built in.

PCFormat Verdict

"Printers used to come without cables. You had to buy them."

78%

In the frame with Philips

Philips' pioneering LightFrame technology goes digital with the launch of its new range of LCDs.



Monitors aren't what they used to be – which is just as well, because neither are computer users. Originally all that we expected from the humble monitor was work-related characters in eyeball-popping green-on-black. Now many of us spend both our work and relaxation time looking at screens that are loaded with images, which should be presented in all their glory. They flood in from the internet, friends' emails – and increasing numbers of us spend our evenings desperately trying to remove red from eyes and add it to sunsets. It's this change in the way in which we use computers that has driven the development of LightFrame, a technology from Philips.

This technology enhances images displayed on screen, significantly improving brightness, sharpness, contrast and colour. It works equally well on still and moving images, so it's perfect for browsing the internet, working with digital photographs, playing games and watching DVDs.

Going digital

LightFrame can be applied to the whole screen (ideal for DVDs, DTP and games), user-selected areas of the screen (excellent for photographs and other image re-touching), or it can be set to detect images within *Internet Explorer* and apply itself automatically to those.

It was released three years ago as an analogue technology on Philips' high-end CRT monitors. Now for the first time, LightFrame is about to be released as digital technology on an LCD monitor courtesy of the snappily-named 150P4AG – known to its friends as the 15-inch Brilliance.

The highest specification

As you might expect, this is an already high-end specification device with 1,024 x 768 pixels displaying 16.7 million colours at a maximum of 75Hz. The 150P4AG accepts both DVI Digital and VGA analogue inputs and has an integrated pair of 1W-per-channel RMS speakers. With an asking price of £350 (inc VAT), you can be assured that you're receiving a quality product with high overall specifications – in essence, you could say that the LightFrame technology is provided for free.

Philips' 150P4AG is due to reach the stores in mid-May, about the time you should be reading this. It will be available in selected stores and forms part of a new range of LCD monitors from Philips. More details about the range are available at **www.philips.com/pcstuff**. However, one lucky reader of *PCFormat* will not only be the first kid on their block to be able to wow their friends with LightFrame technology on LCD, they will be able to do it for free, because we have one of these superb monitors as a prize in our reader competition. See below for details of how to enter.



Worth £350 in total

www.philips.com/lightframe

ENTER TODAY

To be in with a chance of winning the Philips 150P4AG LightFrame LCD monitor, answer this question:

[redacted]

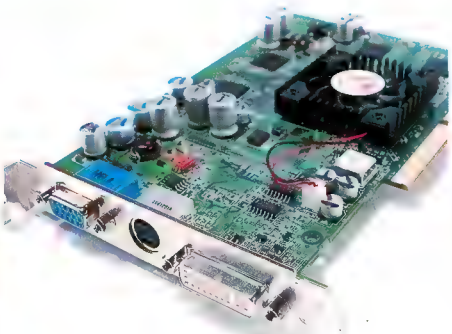
a) Brightness
b) Sound
c) Sharpness
d) Contrast
e) Colour

To enter the competition, pop along to the *PCFormat* website – **www.pcformat.co.uk** – and follow the link. The closing date is 30 June 2003.

THE RULES

1/ Employees of Future Publishing, Philips, their agents or families, are not permitted to enter this competition.
2/ No correspondence will be entered into. The judge's decision is final.
3/ Entries must be received by 30 June 2003, which is the closing date.
4/ No purchase is necessary.
5/ Only one entry per household, please.
6/ The names and contact details of entrants may be retained for marketing purposes, unless you click the appropriate box on the entry form.
7/ The winner will be the first correct entry drawn at random from all of the entries and will win a Philips 150P4AG monitor.
8/ The winner will be notified by email or phone.
9/ We reserve the right to substitute an equivalent prize of equal value.





ALIENWARE AREA-51 HYBRID

£1,199 (starting price) Alienware

A game cube but nothing to do with Nintendo.

When it comes to a truly powerful gaming rig, the tower is still the only viable option. However, the outlook is changing. The rapid development of the Shuttle PC architecture presents gamers with a new, compact alternative. Alienware has been quick to grasp the concept and run with it, in the hope that the cash-rich gamer will come round.

The building block for the Area-51 Hybrid is Intel's 845GE chipset, one of the fastest P4 chipsets with support for DDR333 memory and Hyperthreading technology. So this Shuttle runs a 3.06GHz P4 with 1Gb of DDR RAM and, crucially, a Radeon 9700 Pro through the board's 4xAGP. Via the 9700, the Hybrid deals with any polys that *UT2003* can chuck at it, and with support for the Radeon 9800 already in place, the system has everything it needs to support next generation titles.

The Hybrid excels as a LAN rig, providing a light and portable alternative to the current crop of modded systems. The lack of TV-out via the 9700 rules out the full media system option, but there's no doubting the Hybrid's credentials as a stylish and powerful alternative to your desktop, with saving space an added bonus.

Drawbacks? Well, Shuttle PCs are essentially a closed box with little room for expansion, and this is a reassuringly expensive item – the machine we reviewed is pricier than the £1,199 price since it features a processor upgrade, better graphics card and so on. Still, this little cube epitomises the progress of the Shuttle over the last 12 months and should have you reassessing your gamer's 'think big' perspective.

Mark Sutherns



→Detail

Processor 3.06GHz Intel P4
RAM 1Gb Corsair XMS PC-2700 DDR SDRAM
Hard drive 120Gb Seagate Barracuda
Graphics ATI Radeon 9700 Pro 128Mb
Soundcard Audigy 2 6.1
Drives DVD-ROM, CD-RW
Ports 2x USB 2.0/1.1, 2x FireWire
Dimensions 188 x 200 x 300mm
Web www.alienware.co.uk
Phone 0800 279 9751



RADEON 9600 PRO

£150 ATI

Another Totally Innovative graphics card?

So far so good. ATI claims to be making a seamless transition to the 0.13micron manufacturing process that held up the release of the GeForce FX, and the appearance of a reference 9600 Pro, ATI's first 0.13 card, seems to support this theory. Initial impressions of the card are good – it's small, the fan is tiny given the core clock speed and there's no external power requirement. The plan is for the 9600 series to supersede the existing 9500 boards, and to do it fast. Mainly, we assume, because the 9500 Pros sell at very low prices but are expensive to manufacture because they use the same core as the high-end 9700 cards.

Unfortunately, it may leave people who missed out on grabbing a 9500 Pro feeling ripped off. Despite its higher clock speeds, the fact that it only has a 128Mbit memory bus and four pixel pipelines means that it's slower in all our tests that its older sibling. The gap in 3DMark 2003, for example, begins at 3,598 versus 3,243 at default settings, and rises to 841 against 599 at 1,600 x 1,200 resolution with 4xFSAA and 4x Anisotropic filtering. Similar results are found in *Quake III* and *UT2003*, the rendering speed of the 9600 Pro in the Antalus fly-by test and at high detail settings in Q3 being up to 25 per cent slower than the 9500 Pro.

The 9600 Pro suggests greater things to come from ATI, even if it's disappointing that the first offering didn't shake the graphical world to its foundations. It also has the advantage in that there's no real competition at the moment – we've yet to see nVIDIA's mid-range DirectX 9 counterpart, and it'll struggle to compete on price with this. But while taking a step back in order to leap forward may be a sensible move for the graphics card makers, it leaves us feeling a little short changed.

Adam Oxford



→Detail

Core speed 400MHz
Memory speed 600MHz
Memory 128Mb DDR, 128Mbit interface
Rendering pipelines 4
AGP 8x
Ports VGA, DVI, S-Video
Tested on Athlon 3000XP, 512Mb Crucial DDR400, Chaintech nForce 2
Web www.ati.com
Phone 01628 477788

→Benchmarks

3DMark (Default/Quality)
9500 Pro 3,598/841
9600 Pro 3,243/599

Unreal Tournament 2003 (Flyby/Botmatch)
9500 Pro 64.41/13.29
9600 Pro 63.58/ 10.401

Quake III (Default/Quality)
9500 Pro 238.9, 131.0
9600 Pro 232.8, 114.7



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MFC-890 £329.99 inc. VAT*



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- Separate ink cartridges



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→Detail

Processor
400MHz Intel XScale
Memory
32Mb ROM, 64Mb SDRAM
OS Windows CE .NET (Windows XP Professional on desktop)
Battery life 3-4 hours
Multimedia Mono speaker built in microphone
Expansion slots 2x USB ports, mini USB port for setup microphone and headphone jacks, docking port connector, Type 2 PC Card slot (not used yet)
Screen 10.4-inch Active Matrix SVGA LCD anti-glare touch screen
Network Built in 802.11b wireless networking
Bundled Smart Display Services, Windows XP Service Pack 1, Windows XP Professional Edition Upgrade, 802.11b airsync USB wireless adaptor spare stylus, lanyard, USB setup cable
Dimensions
292 x 213 x 25.4mm
Weight 1.2kg
Web www.viewsonic.co.uk
Phone 01293 643900



AIRPANEL V110 SMART DISPLAY

£869 ViewSonic

Mary Branscombe totally loses the use of her legs, thanks to this wireless LCD.

Can't be arsed to wander over to your desk? Why bother? With the Airpanel you can use your PC without leaving the comfort of your armchair. Like the Philips desXcape (*PCF* 148), this is a wireless touch screen that shows your PC desktop as if you were sitting in front of it. You just need to leave your PC on and use Windows XP Professional (the Airpanel comes with a free upgrade, as well as a USB wireless adaptor to connect via 802.11b).

Assault and battery

The Airpanel doesn't turn off unless you run out of power, so it's ready in seconds. Using it for five minutes doesn't eat a lot of battery life; keep using it and you get just over three hours from a full charge. You control Windows by tapping the pen on the screen. There's a four-way navigator to move the cursor, plus right and left mouse buttons, a button to open the Input Panel and one to disconnect from your PC. The Input Panel has an on-screen keyboard and a handwriting area, with controls to hover and right-click. More useful options are hidden under Advanced settings where you can turn on tap and hold to right-click, use predictive typing and more.

These controls and the initial dashboard screen with your user account are all you see of the operating system, Windows CE .NET – everything else is your XP desktop, with your PC running the programs. It's nowhere near as fast as pumping data down a VGA cable, so you don't get your wallpaper, you can't stream video (Microsoft says this will improve in later versions of the software) and DirectX and 3D games aren't supported. You get everything else from your PC though.

Rock around the dock

The 10-inch screen is small, but makes the Airpanel light enough to carry around. If you want something larger, the 15-inch V150 (for an extra £230) gives you a good size, although it's bulky on your lap and a little large to move around. The V150's optional dock (another £179) isn't just a charging stand. Like the V110's dock (an extra £149), it has USB ports for a keyboard and mouse, but also a VGA port for use as your main monitor.

The technology of Smart Display is sound, and we like the Airpanel a bit more than the desXcape – the 10-inch screen is truly portable. But you're paying for convenience, and you're paying a lot for it. There are better solutions for more versatile effect, and until smart displays drop in price, we can't recommend them. **PCF**

PCFormat
65

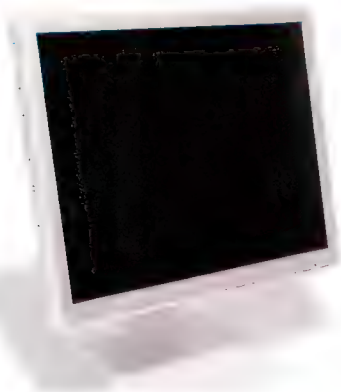
Features close-up



In control
The power button only turns the screen off – the Airpanel stays on all the time. The other controls open the Input Panel, disconnect you and move the cursor around the screen so you can click with the mouse buttons (on the other side of the screen).



Plugging in
The sound from the little speaker on the front is better than you might expect, but you can plug in speakers or headphones (and a microphone) next to the power jack if you want.





NEC LED1760NX

£429 NEC

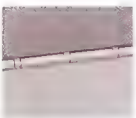
A professional's display garbed in grey with a dazzling screen that will blow you away – hey, that rhymes!

For a long time now, people have speculated over the final day of reckoning for the CRT monitor. Challengers from household name after household name have stepped up to claim the throne, but to this day the hardcore gamer has still to be convinced. This reluctance is not borne out of fear or stubbornness – gamers simply won't sacrifice the performance and, more specifically, the response times of their CRT displays for the superficial style of a TFT.

While the NEC 1760NX won't be seducing anyone with its plain Jane looks, it does claim to have some of the best response times available in the 17-inch TFT market, and all at a perfectly agreeable price, too. The NEC comes with calibration software, a power cord and a D-sub 15-pin cable, which is something of a let-down because the panel itself has provision for digital DVI-D which really should be used for the display to deliver its best performance.

Within Windows, and when viewing DVD movies, this display produces vibrant colours that appear strong at all but the most acute viewing angle. However, the real test of any TFT's mettle is fast-paced gaming. After a rigorous session on a variety of today's premier first-person shooters, we're left in no doubt that NEC has been successful in its efforts to reduce the response time of the 1760NX down to a respectable 16ms. Movement is fluid and there's no obvious blurring or persistence of image that's normally attributed to 3D gaming when using flat-panel screens. You never know, with such a razor sharp image, NEC's screen may even aid your online gaming.

John Skeoch



→Detail

Screen 17-inch (43cm) TFT
Brightness 260cd/m2
Contrast 450:1
Response Time 16ms
Viewing angle
140° horizontal and vertical
Native resolution
1,280 x 1,024
Inputs D-Sub 15-pin & DVI-D connector
Web www.neceurope.com
Phone 08701 201160



HERCULES PROPHETVIEW 920

£450 Hercules

If image is everything, the Hercules Prophetview 920 has it all and a little bit more.

TFT monitors are everywhere these days, and with such a choice, you could be forgiven for just sticking with your trusty CRT instead. One way for a flat panel to stand out from the crowd is to offer something a little different. The Hercules Prophetview 920 looks fantastic, with titanium control buttons encased in a 28mm-deep, sleek, jet black cabinet, all perched on a stylish boomerang base, making the footprints of other flat panels look positively gluttonous.

However, looking past the gloss, a number of failings come to the fore. With the majority of today's graphics cards offering both analogue VGA and digital DVI-D ports, it's disappointing that Hercules opted to offer two separate models for either connection (we're focusing on the standard model equipped with 15-pin VGA D-Sub). As with the majority of 17-inch TFTs, the Prophetview has an SXGA native resolution.

In tests, the panel reproduces excellent definition on still images and gives an acceptable, if slightly pink, representation on DVD playback. However, when we move on to high-speed games, the older technology powering the Prophetview 920 becomes apparent, with many first-person shooters suffering from motion blurring. Another problem is the viewing angles – you don't have to stray too far from dead centre before the image quality degrades considerably. The Hercules Prophetview has a style that sets it apart, but the display itself lets the whole package down.

John Skeoch



→Detail

Screen 17-inch (43cm) TFT
Brightness 250cd/m2
Contrast 350:1
Response time 30ms
Viewing angle
150° horizontal and vertical
Native resolution
1,280 x 1,024
Inputs D-Sub 15-pin
Web
http://europe.hercules.com
Phone 020 8665 1881







EVESHAM EVOLUTION 20:20

£1,234 Evesham

Evesham celebrates two decades of PC-building.

Twentieth birthdays are something of an anticlimax While they may signal the end of those terrible teens, they lack the excitement of an 18th or 21st In fact, people often end up commemorating their twentieths by getting drunk and behaving inappropriately, just as they do every weekend of their lives. Evesham has done something similar Rather than marking a double decade by downing vodkas and attempting to pull members of the opposite specs, this is a more sedate celebration. Evesham has decided to release another PC

As it happens, the landmark machine is a pretty good one Its Gigabyte motherboard comes equipped with a reasonable 2 66GHz Pentium 4 processor, but its hyper-threading support means that later upgrades could go way past the 3GHz mark As for memory, 512Mb of high performance dual channel DDR400 RAM speaks for itself, and two DIMM slots remain free for enhancements There's plenty more to get excited about elsewhere A 52x CD-RW drive and an LG DVD-RAM form an unusual but useful combination Meanwhile, supplementary back-plates complete a formidable line-up of ports that totals four FireWire, four USB 1 1 and two USB 2 0

Our only reservation about Evesham's birthday present is its graphics card A Radeon 9500 is far from shabby, but it would have been nice to see a card that could really make the most of the AGP 8x compatibility If you invest in this machine, your next purchase should be a Radeon 9700, or even 9800 Pro – then there really will be reason for celebration. **Russell James**



→Detail

CPU Intel P4 2 66GHz
Hard disk Matrox 120Gb
RAM 512Mb Dual DDR
Graphics ATI Radeon 9500
Sound Creative Sound Blaster Audigy (FireWire), Creative Inspire 61 speakers
Monitor Mitsubish Diamond Pro 18-inch CRT
Motherboard Gigabyte GA-8SQ800
Coms CNXT 52K V92 fax/data modem
Front ports 2x USB 1 1
Back ports PS 2 mouse/keyboard, 2x USB 1 1, Ethernet, 2x serial, parallel gameport, speakers, line-in, mic, 3x FireWire 2x USB 2 0, 56K modem jack
Drives LG DVD-RAM Samsung CD-RW
OS Windows XP Home
Web www.evesham.co.uk
Phone 08207 287 070

TIME XP3000+

£1,300 Time

PCF gets first dibs at Time's latest power box for games. In a lovely shade of beige.

When your efforts are usually dismissed as first-time buyer budget packages, how do you go about impressing the critics? By packing your next offering with every pricey component on their wish lists, that's how.

The XP3000+ holds itself firmly between two markets. the inclusion of both a DVD multi-writer and DVD-ROM alongside front-mounted support for SmartMedia, Compact Flash and Memory Stick hint towards productivity, while the sheer power and graphical prowess are enticingly gamer-friendly. The system sells itself on the inclusion of the Radeon 9800 Pro which, supported by 1 Gb RAM, proceeds to eat benchmark tests and anything else we throw at it for breakfast. The 19-inch LG Flatron helps too, and the stylish ZXR-550 surround sound system is more than expected at this price Five USB 2 0 ports will satisfy most appetites but none of this can hide the fact that this system was built for raw power, not style

With so many top notch components inside, it's easy to see where Time has been frugal to keep the price down – you'll struggle to impress your friends with anything that looks so dull And rather than some juicy apps and games which can unleash the power of this machine, we're greeted by a handful of also-ran software fillers Cheap isn't always second-rate though, as the inclusion of *Star Office* rather than *Microsoft Works* effectively demonstrates.

Aesthetics aside, this is a wholly impressive system Who cares what you're hiding under your desk if it performs like this, right? **Kelly-Marie Dudley**



→Detail

CPU AMD Athlon XP 3000+
Hard disk 150Gb
RAM 1Gb
Graphics Radeon 9800 Pro
Sound PURE Digital ZXR-550 speakers
Monitor 19-inch LG Flatron F900P
Motherboard MSI KT4 Ultra
Coms 56K fax modem
Front ports USB 2 0, SD/MMC, Compact Flash, Memory Stick, SmartMedia
Back ports 4x USB 2 0, PS2 mouse/keyboard Ethernet, microphone, line-in, speakers, 56K modem jack
Drives Matsha SW-9571 DVD multi-recorder 16X DVD-ROM
OS Windows XP Professional
Web www.timecomputers.com
Phone 0870 830 3110

PCFormat Verdict

Great flexibility with plenty of ports and loads of room for expansion

Not quite outstanding in performance, and not the fastest graphics card

83%

PCFormat Verdict

Great speed and performance, powerful graphics and a low cost

Comes like bundled software, also with a generic design

"The price is compromised by the style, but it's what's inside the box that really counts."

88%

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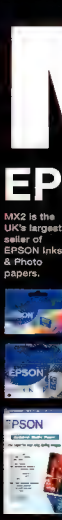
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IPAQ POCKET PC H1910

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Microsoft's not-so-portable wideboy is taken down a peg.

One of the most aggravating technological curses of this year has to be polyphonic ringtones. Hearing the *Thundercats* theme tune performed by a Polynesian brass band emanating from someone's pocket is never going to be a charming experience, and life's not going to get any easier now PocketPCs seem to have elbowed Palm handhelds out of the roost. Curse them with their 16-bit sound and authentic Windows noises, ding-dinging across the office every five minutes. At least this cut-down iPAQ brings some revolution to the chunky PocketPC market, so you no longer look like you're afflicted with some sort of genital swelling when carrying it around. It's roughly half the size of a standard iPAQ, or the monstrous Dell PocketPC on this page.

Of course, there's a power trade-off, with the h1910 clocking in at just 200MHz, compared to the 400MHz X-scale chips which power most of its peers, and just 16Mb of ROM. But then, what are you going to use it for? From an organisational point of view, Palm/Handspring/Sony devices have retained a certain edge over PocketPC handhelds, which aim at a broader catchment of uses. The h1910 harkens back to those days of calendar-checking and contact-finding, while cramming in almost all the features of any other PocketPC. There's no jog wheel, no space for iPAQ expansion jackets and no wireless kit, but it still handled most applications we threw at it, even office favourite *SCUMMvm*, the adventure game emulator. If you're after a muscle machine then look elsewhere, but for convenience and cost-saving, this is a little wonder.

Alec Meer



→Detail

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AXIM X5 POCKET PC

£267 Dell

Anything HP/Compaq can do, Dell can do... well, almost as well, anyway.

The battle of the desktops has stumbled on to newer, smaller fields. Only this time last year, PocketPCs were a fairly niche market, but now every Jack and his corporate sister is having a crack at creating a handheld. Briefly distracted from its attempts to conquer the office world with ash-black desktop PCs, Dell has landed this big momma of a PDA on our desks.

There's absolutely nothing new here – it's the same 400MHz X-Scale CPU that most PocketPCs now carry, there's the same 64Mb of memory, the same MS PocketPC 2002 Premium OS, the same applications and the same hardware features as almost anywhere else. The difference, of course, is the price – it's barely any dearer than the iPAQ h1910 reviewed on this very page, but it doesn't have any of the power trade-off. It is unnecessarily large though, and some frankly pointless rubberised side grips increase its width more than we'd like. It makes up for this shortfall with the snazziest USB cradle we've ever seen on a PDA, complete with a luminescent blue Dell logo, plus a hatch to store and charge a spare battery. The latter is close to a godsend – we've been in far too many meetings, surreptitiously playing solitaire on our PDAs, when we're greeted with a 'low power warning and have to turn the thing off and pay attention again. Now you can just pop in the spare when the juice is low and squeeze a few more hours out of it.

What's most interesting is that a fully-specced handheld such as this is available at such a low price. It's a sign that the overcrowded market is waiting for something, a foretelling of the shattering of the current PocketPC status quo.

Alec Meer



→Detail

OS
Microsoft PocketPC 2002
Processor
Intel XScale 400MHz
Resolution 240 x 320 resolution 16-bit TFT
Memory
64Mb RAM, 48Mb ROM
Expansion Compact Flash Type II, SD/MMC
Dimensions
128 x 81.5 x 18mm
Weight 196g
Web www.dell.co.uk
Phone 08 70 907 5818

PCFormat Verdict

A fantastic small design and a cheap price tag too!

Lacks the punch which its competitors have

90%

PCFormat Verdict

Low price and very welcome spare battery facilities

Unnecessarily large and clumsy

84%



IPAQ POCKET PC H5450

PCFormat gold

£530 HP

Sets a new standard for progress, while looking the same.

Never miss an email. Never miss an appointment. Never be unable to call someone. Never be more than six inches away from a spreadsheet. Never rest. Never sleep. Never, ever stop working. Sometimes we really hate PDAs. This rage is compounded by this latest iPAQ, which firmly slams shut the only escape door we had from corporate omnipresence. After all that moaning we've done in recent PDA reviews about there not being enough with built-in wireless support, here's one with on-board Bluetooth and Wi-Fi.

Which makes this tool of corporate oppression rather wonderful. Bluetooth is perfect for linking to other devices such as printers, or even to a mobile phone for a go-anywhere internet connection, while Wi-Fi is the best way of jumping on to a local network. Previously, each of these standards required a separate and expensive jacket that meant you couldn't affix anything else while it was on, but this model, apart from the occasional antenna lump and extra LED, looks exactly the same as prior ones, so you can happily attach another jacket and not have to remove your wireless gubbins. A rather bizarre extra is a fingerprint security system that's more gimmicky than useful. There's a very decent piece of TV remote software stored permanently on ROM too.

Underneath the skin, it's the same hardware that's powering just about every PocketPC on the market at the moment – a 400MHz Xscale CPU and 64Mb RAM, plus the iPAQ series' patented file store and extra menu gubbins. So, it's the same deal as always, but adding the wireless stuff is a stroke of genius. **Alec Meer**



→Detail

Processor
Intel Xscale 400MHz
Memory
64Mb RAM, 48Mb ROM
OS
Microsoft Pocket PC 2002
Battery
1250 mAh Lithium Polymer
Screen 240 x 320 resolution Transflective TFT
Other Onboard 802.11b, Bluetooth and Biometric fingerprint reader
Dimensions
138 x 69.8 x 12.8mm
Weight 206g
Web www.compaq.co.uk
Phone 0845 270 4222



SONY VAIO PCG-ZISP

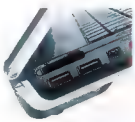
£1,999 Sony

Sony's first Centrino notebook packs plenty of grunt but lacks that certain *je ne sais quoi*.

There has been a lot of belligerent bluster in the marketing of Intel's new Centrino chipset, so we're rather glad to have the chance to put it to the test. This is Sony's flagship model. It's not as good looking as previous VAIOs and the ports are squeezed into the left-hand side, which could lead to cable tangling. Of course, the point is that you'll connect wirelessly via the built-in support for 802.11b wireless networks and Bluetooth connectivity, thanks to the miraculous on-chip connectivity of Centrino, but all the same.

Only two USB ports are provided (though they are USB 2.0), along with FireWire, and there's a Memory Stick slot too. Although the VAIO weighs just over 2kg, it feels heavier, no doubt thanks to the 14-inch LCD and integrated CD-RW/DV drive. Performance is aided by a healthy dollop of RAM (512Mb), and battery life is impressive. Sony claims six hours, but three to four is more realistic in everyday use. This is no gamer's notebook though, a Mobility Radeon graphics card with 16Mb of memory delivers a lacklustre 3D Mark 2001 score of 1530. Lots of fancy creativity software comes as standard, including *Photoshop Elements 2*, *PictureGear* for creating photo albums and the *MovieShaker* DV editor. The generous screen, plus support for USB 2.0 and FireWire, make this a good choice for photographers.

The VAIO's biggest problem is that it feels bland, and you're paying a premium for the cachet of the brand. Sony can no longer rely on this in such a crowded market. May we respectfully suggest that they look at Samsung, which is producing a range of slimline Centrino notebooks with rather more charisma. **Geoff Harris**



→Detail

Processor Centrino Mobile Technology 1.50GHz
RAM 512Mb
Hard drive 60Gb
Graphics
ATI Mobility Radeon 16Mb
Drives CD-RW/DVD drive
OS Windows XP Pro
Web
www.vaio.sony-europe.com
Phone 08705 424424







gold Format

ANTEC SONATA

£92 Antec

Not quite so black that you can hardly make out its shape, but bad for the eyes nonetheless.

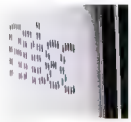
Recently it's become impossible to keep track of the companies cashing in on the grow ng enthusiasm for PC cases that are a little out of the ordinary. And it's fair to say that most of them are rubbish. Apart from the iMac wannabe Fisher-Price plastic tat, there's a lot of chunky black cases which are no more than a standard, noisy tower case on its side

Antec has bags of experience with the PlusView-style server cases so popular with gamers, but the Sonata is the first in a special series of Lifestyle cases designed to help you expand computing into the lounge Eschewing the trend for small form factors, the Sonata is a full-size tower with just as much room to work in as the company's server boxes. The glossy case wouldn't look out of place in the most understated media centre – though we're not sure about the blue LEDs on the front.

But it's not just the unique external design that makes the Sonata so appealing. The vents at the front have been designed to maximise airflow, meaning that a single 120mm fan is enough to cool even the hottest of systems. And the 380W TruePower supply that comes as standard scales its output to meet the system needs, so that if you're doing something non-intensive it's silent.

We have to be honest – we'd all but given up on full-size PCs having any future in the living room. It was EPIA boards and Shuttles all the way, and save the ATX towers for the office or back bedroom, thank you very much Antec has convinced us otherwise – and there are two even more unusual designs on the way. You may not be convinced that big is beautiful or even tolerable, but at least now you have a choice.

Adam Oxford



→Detail

Dimensions 430 x 205 x 205mm
Drive bays N ne
Included PSU 380W TruePower 12VATX
Fan 1 x 120mm case fan
Front panel 2x USB, 1x FireWire 2x audio
Other Washable air filter
Web www.antec-inc.com

PCFormat Verdict

Unobtrusive design, quiet running

Not to everyones taste, full size tower

"Fantastic design with a lot of consideration involved, Adds to the options for building a convergence PC."

90%



ILUMINATE LED LIGHT TUBES

£13 Antec www.antec-inc.com

Obviously we applaud the smallest opportunity to fiddle about with our PCs and make them pretty, a weakness that Antec has picked up on. Powered by your USB port, these little blighters can be attached to any external part of your PC (or anatomy) and reward you with a miniature light show. It's possible to switch between a constant glow and sound activation, slightly extending their allure They're not particularly robust but they'll certainly outlive their novelty

PCFormat Verdict

first step towards the desktop disco

They perform no function bar

70%



gold Format

ZALMAN CNPS 7000 CU

£43.42 Chillblast www.chillblast.co.uk

OK, so it's not as dramatic as the fanless Flower, but Zalman's latest heatsink performs more impressively In the centre of 773g of copper is a 92mm fan with a throttle control – at its lowest setting it's virtually noiseless. It's hugely efficient at drawing heat from the CPU – in all our testing we didn't once need to increase the speed. One drawback is that the control sits inside the case, which means the side has to come off to adjust it. Weighing more than recommended for a P4 board, the 7000 includes a robust retainer; you have to bolt it on, which gives the advantage that this heatsink will fit either Pentium 4 or Athlon boards

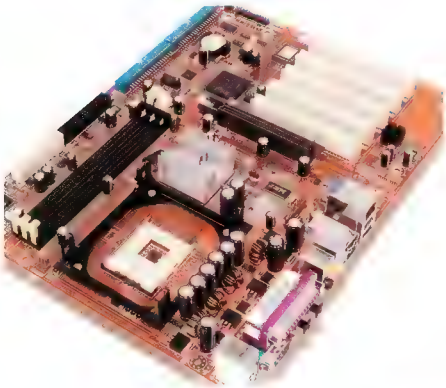
PCFormat Verdict

Near silent, but tunable for overclocking

So heavy it may damage a motherboard

"Costly for a mere heatsink, but a must for silent operation."

92%



ABIT BH7

£79 Abit

With Intel's new 800FSB chipsets on the horizon, is it still worth considering an i845PE motherboard?

We've been spoiled recently by feature-packed motherboard offerings from Chaintech, so Abit's BH7 package seems a little sparse. Apart from the board itself you get a drivers CD, manual, IDE, serial ATA and floppy cable – and that's it.

This lack of add-ons isn't all bad, though. Most motherboards are packed with slot brackets – necessary if you want to use the various ports promised on the box. The Abit BH7 places all the connectors you need on the rear panel instead (including 4 USB 2.0, a Fast Ethernet LAN, optical S/PDIF input and output ports), meaning all its five PCI slots are available for your use.

Including five, rather than six, PCI slots has more advantages elsewhere, because the BH7 has a fairly pleasing uncluttered layout. The ATX power connector, IDE and floppy ports are all stretched out along the far side of the board, while you can add memory to the three DIMM slots without removing the graphics card.

The BH7 will also appeal to overclockers, with many useful options available in the BIOS. The FSB can be tweaked from 100 to 250MHz, you can adjust the PCI and AGP clocks, and increase CPU and memory voltages up to 2V and 3V respectively.

It's even possible to choose your own memory divisor (1:1, 3:4 or 4:5), so you should be able to squeeze every last scrap of performance out of the system. That is certainly our experience – we ran a 3.06GHz Pentium 4 at 210MHz FSB with no problems at all. The BH7 should be able to run the upcoming 200MHz Pentiums, too, making it far more future-proof than most of the i845PE competition.

Mike Williams

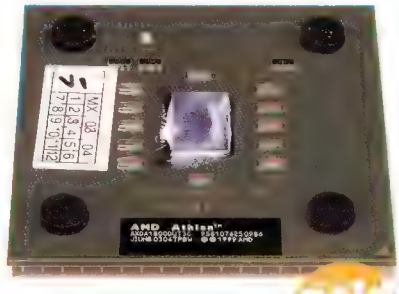


→Detail

Chipset Intel 845PE
FSB 533/400MHz
RAM Max 1x DIMM DDR400, 2x DIMM DDR333 (2Gb), 3x DIMM DDR266/200 (2Gb)
Drives 2x UDMA 100/66/33, 1x serial ATA 150
Expansion 1x AGP 4x, 5x PCI
Ports 4x USB 2.0, 1x RJ-45 LAN (10/100), 1x S/PDIF in, 1x S/PDIF out, 2x PS/2, 1x serial, 1x parallel
Web www.abit.com.tw
Phone 0870 872 7107

PCFormat Verdict

84%



MAGIC XP 1800

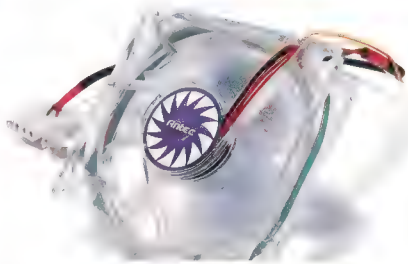
£55.23 Chillblast www.chillblast.com

Apparently, demand for the AMD 1800XP in Korea is so high, that the company supplies 2600XPs clocklocked to a lower FSB. Tech heads will be aware that the 1800XP runs on a 266MHz FSB, while the 2600XP runs on a 333MHz FSB. To unlock the chip, you have to cut some bridges and short others. Or, you can go to Chillblast who will do the work for you. Then boost your motherboard's FSB and you have a £150 chip for £50. Our tests show this to be true and the Magic performs as well as a regular 2600XP. We've yet to run into any stability issues, so hoorah. Go forth and save before Chillblast is closed down!

PCFormat Verdict

A bargain for saving £100 on a processor

93%



80MM TRILIGHT LED FAN

£9.11 Antec www.antec-inc.com

One for the case modders here, then. As our Hardcore section has proved over the last few months, there are many ways to place a fan for maximum effect. On the front, at the back, in rows along the bottom in order to try to achieve lift off. If you're going to pick up an illuminated fan, though, Antec's range has as good a variety as any, coming in all shapes and sizes. There's no throttle control or increase in blade size to keep the noise down, but if you're after a green purple and blue fan, we're guessing understated isn't your style. Having said that, there is a quieter 120mm variant, but the silence would be too eerie for us.

PCFormat Verdict

Adds a little colour to your PC.

82%



FREEHAND MX

£339 Macromedia

The latest release of Macromedia's industry-standard print design and web tool is nothing short of superb.

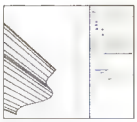
The latest, and final, tool to be updated to the MX mantle is *FreeHand*, Macromedia's vector drawing application. The package has long been one of the two industry-standard illustration tools (the other being *Adobe Illustrator*), and with this release Macromedia has really gone to town, overhauling the app and adding some simply stunning new features.

Firstly, the interface is very different to that found in previous incarnations. Like all MX products, each palette can be rolled up to save space and, similarly, grouped with other palettes. The interface is immediately easy to navigate and takes up little of the working area.

The Objects panel has been completely changed in *FreeHand MX*. It now works hierarchically, meaning you can apply multiple strokes, fills and effects (such as bevels, glows and so on) to an object and then change the order in which they are applied, all with drag and drop. This method of working is extremely intuitive and you can even save combinations of effects as styles for use at a later date.

The Extrude tool is another new feature. This is an amazing addition that enables you to take a 2D object, extrude it interactively and then rotate the extrusion in 3D space. In the world of 2D vectors, this is like manna in the desert. You can even adjust the shading options, add a bevel and choose a light source. Other new features include the Connector tool for mapping out website plans and an Action tool for creating *Flash*-based presentations from within *FreeHand*. Undeniably brilliant both print and web designers should take a good long look at *FreeHand MX*.

Rob Carney



→Detail

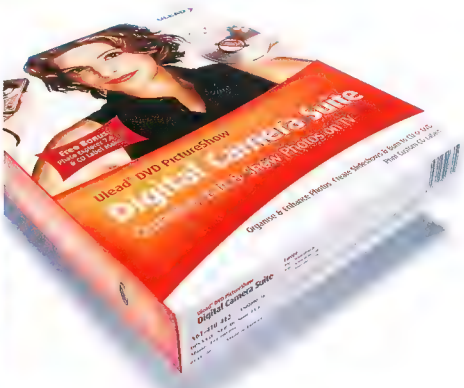
Features Vector illustration and drawing, multi-page design tool, web tools, new Extrude tool, live effects, *Flash* compatibility
Needs PIII-300, 64Mb
Web www.macromedia.com/uk
Phone 020 8200 8282

PCFormat Verdict

Wide variety of stunning drawing tools

A little slow on older PCs

92%



DVD PICTURESHOW DIGITAL CAMERA SUITE

£30.99 Ulead

Transfer your digital photos to your TV the simple way with this three-piece suite.

Everyone, it seems, has a digital camera, and if the relentless attempts to shoehorn a CCD into just about every device continue, you'll be under an all-seeing eye from your digitally-videotaped birth to the sepia-tinted photo slideshow that plays at your wake.

However, while this ubiquity makes it very easy to accumulate images, it's still something of a fiddle to show them off away from your PC. *DVD PictureShow* addresses this by enabling the transfer of your holiday snaps onto CD-R or DVD-R, so you can inflict them on anybody with a compatible set-top DVD drive. Doing so is very easy – just rifle through your hard drive and pick your favourite snaps, throw on a title or a backing track and pick out a template for the DVD menu. It's basic but it works, and the results are good and quickly achieved.

However, you have to harness the more advanced features of *Photo Explorer 7.0* to edit your photos, which requires a separate installation. While this includes tools for organising, renaming and editing your images and is also easy to use, it's irritating having to jump between the two programs, particularly as *Photo Explorer* has a more substantial, but DVD-deficient, slideshow creation function. *Photo Express 4.0 MCE Plus* is also included, and is similarly dislocated – it offers more basic photo management without really linking to its companions.

While the functionality isn't bad, we'd like to have seen it in a scalable, combined interface, rather than spread over three separate programs.

Jon Hicks



→Detail

Programs *Ulead DVD PictureShow, Ulead Photo Explorer 7 Pro, Ulead Photo Express 4.0 MCE Plus*
Needs Pentium, 64Mb
Web www.ulead.co.uk
Phone +49 2131 512 585

PCFormat Verdict

Lots of features, easy to use

Iffy integration, nothing innovative

"Some very helpful tools, but it's really more of a grab-bag than a genuinely integrated package."

69%



DELL PC
READER OFFER

YOUR ULTIMATE PC?

Whatever you're looking for, it's as easy as Dell.

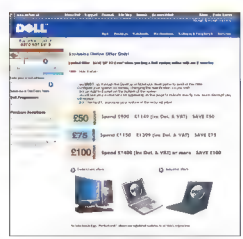
The guys at Dell focus on just one thing: giving you quality desktop or notebook computers which are great value for money. Buying a computer from Dell can be done with confidence because the company makes three promises. The first is that it pledges to supply a high-quality machine at great value price. The second is that it always strives to bring you leading-edge technology and smart designs for the home or home office. And the third is that it delivers award-winning service and support. Don't forget, Dell will build your system to order, too. It's as 'Easy as Del.

The best deals are, as always, to be found on the internet. Check out **www.dell.co.uk/pcformat** for a special offer exclusive to *PCFormat* readers. Because Dell sells through the web, you can visit its shop 24 hours a day at your leisure. Of course, it's also secure, it's one of the world's top sites for internet transactions, and the Dell team knows how important it is for you to feel secure using your credit card to buy computers online. So, for added peace of mind, it now offers the Dell Secure Shopping Guarantee to protect you from credit card fraud.

Special offer alert

For readers of *PCFormat*: buy any desktop or notebook PC at **www.dell.co.uk/pcformat** by the end of June 2003 and save up to a fantastic £100 with the Dell e-voucher. This offer is exclusive to readers of *PCFormat*. **PCF**

www.dell.co.uk/pcformat



Visit the special *PCFormat* section of the Dell website and save up to £100 on the system of your choice.

Please note...

This offer is available until 30 June 2003, subject to availability, and only when you purchase online. Prices and specifications are correct at date of publication and may change without notice. Delivery is £49 (£57.58 inc VAT) per system. Dell's terms and conditions of sales and service apply and are available on request and at www.dell.co.uk. Consumers are entitled to cancel orders within seven working days of delivery, product return at cost and risk of the consumer. Dell collection charge £49 ex VAT (£57.58 inc VAT). © 2003 Dell Computer Corporation. Dell, the Dell logo are either registered trademarks or trademarks of Dell Computer Corporation. All rights reserved. Dell disclaims proprietary interest in the marks and names of others. Dell products c/o Millbanke House, Western Road, Bracknell, RG12 1RD. The product shown is a Dell Latitude C400.

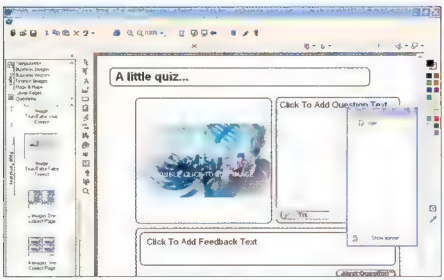


MAVIS BEACON TEACHES TYPING DELUXE 15

£29.99 [illegible]

For the 15th time, the reassuring American lady coaches us through learning to touch type. This time, as well as the standard testing modes to assess our speeds, there's also a variety of resources on building accuracy, rhythm and improving the basic ergonomics of your working environment (Bob the Ergohuman is on hand to demonstrate his favourite positions). If all that testing proves too much, there's a gaming section where your inability to type without AutoCorrect results in the perilous end of a selection of wildlife





OPUS PRESENTER

£99.95 [illegible]

All the power of *PowerPoint* at a third of the price? Digital Workshop is still going to struggle to convert the non-believers. Dabblers, on the other hand, can enjoy all the presentation tools they are used to, as well as adding *Shockwave* components to their seminars with minimal knowledge. Full *Microsoft Office* compatibility is built-in, along with a handy guide to show *PowerPoint* devotees exactly what they're missing out on. While professional users would undoubtedly reap the benefits of the changeover, few will be willing to part with their finances for a program they think they already have





MOVIESHOP DELUXE

£29.99 [illegible]

www.broderbund.com

Home movies need all the help they can get, and with *Moveshop Deluxe* you can add pictures and soundtracks, as well as erasing all those embarrassing moments. For more technical jobs, the software boasts frame by frame editing, although it is clearly intended for entry-level aspiring movie directors. *NeoDVD* is also included, enabling you to create interactive DVD menus.



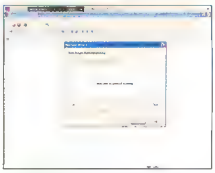


DIVX VIDEO DUPLICATOR

£29.99 [illegible]

This package enables you to perform a straight disc-to-disc DVD copy, as well as tweaking your movies with alternate soundtracks, framings and subtitles. Adjustable compression settings enable you to compromise quality for speed when necessary. It's also bundled with *Avery Design Pro*, a run-of-the-mill way of creating DVD and CD covers for your newly spawned movie collection





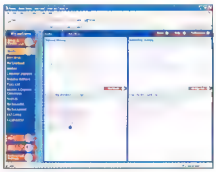
NATURALLY SPEAKING 7

£79.99 [illegible]

www.scansoft.com

Voice recognition software has come a long way. After training, it becomes well accustomed to your voice and corrects most of its mistakes. Individual user profiles also assist its understanding but users still need to double check. While willing to work with existing word-processing packages, this works best with the *Dragon Pad*, a minimalist but complete word-processor of its own.





MYBUSINESS

£149.99 [illegible]

MyBusiness combines an appointments calendar with a contacts book, mail merge and a detailed accounts program for small business usage. The price is reasonable for anyone who would not benefit from purchasing a complete office package and includes a 12-month subscription, to be renewed at £19.99 a year. It is all powered within an internet browser window and includes banner advertising, causing the aesthetics to fail



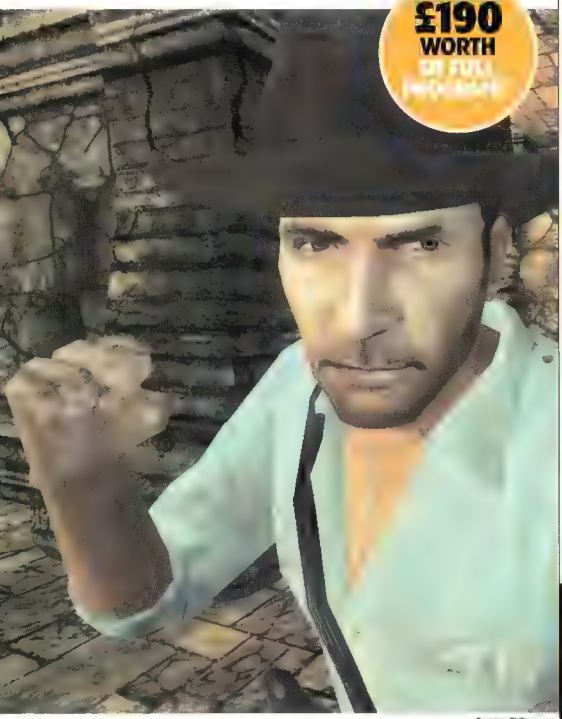
install

↘ON THIS MONTH'S DISCS

Games/Apps/Utilities All your PC needs

INDIANA JONES AND THE EMPEROR'S TOMB

Indy kids rejoice: the world's coolest archaeologist is back on the PC.



Based on DVD version

THIS MONTH



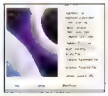
DEMONSTAR

Tonight you're going to party like it's 1985. This complete shoot-'em-up will take you right back to the old-skool days of arcade gaming.



AGE OF MYTHOLOGY: THE GOLDEN GIFT

If you enjoyed Microsoft's epic RTS as much as we did, you'll thank the gaming gods for this bonus campaign.



ACTIVE MEDIA ECLIPSE 4.1

Create stunning screensavers with the minimum of effort. Stop work, sit back and admire your handiwork – as if you needed an excuse to do nothing.

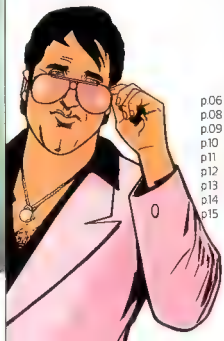


PC TRACKER PRO

If a treacherous tea-leaf makes off with your PC, you'll want to get it back. Now you can – this cunning app emails you so you can trace its whereabouts.

BEHIND THE SCENES OF VICE CITY

An exclusive look at the making of *GTA: Vice City*.



Vice, vice, baby... *GTA* returns to the eighties.

INSTALL CONTENTS

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Frontline Command
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Google-Eyed



Trevor Witt Disc Editor

The internet, it's great isn't it? Lots of useful information, software, music and er, cough, cough films just waiting for you at the click of mouse. Plus the global reach that your average Joe Public can attain in a matter of hours is truly staggering. For instance, who hasn't visited the Muhammed Saeed al-Sahaf fan site over the past few weeks (**www.welovetheiraqi informationminister.com**)? Marvellous stuff.

You might even have been tempted to purchase a replica pack of the infamous Iraqi 'most wanted' playing cards. My choice would be from the lovely chaps at Firebox (**www.firebox.com**) who will not only deliver your beloved purchase swiftly but they'll kindly make a donation to the International Red Cross too. My own favourite find this month, which I stumbled across in a comically tumbled use of the Google search engine, was a collection of space colony artwork created for NASA in the 1970's (**http://lifesci3.arc.nasa.gov/Space Settlement/70sArt/art.html**.) Don't ask what I was actually searching for!

I suppose I'd better spend a moment to mention the disc, before I get my knuckles rapped for rambling again. I'm sure the retro gaming fans amongst you will have noticed the full version of *Demonstar*. This vertical-scrolling shooter will no doubt keep you occupied for many an hour. Those of you who can be a little careless with your PC will, I'm sure, be thankful for the complete *PAL PC Tracker Pro* and if you're wary of all that spyware that can accumulate from your online antics you'll be eager to try *SpyCleaner*. I can go on and on singing the praises of the rest of this month's bumper crop of goodies but I'll leave you to explore for another month. Have a good one.

trevor.witt@futurenet.co.uk

The complete package

The best full programs Our discs deliver top-quality, high-value apps and utilities. Let us know if there's something you want and we'll get it for you!

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What have you got? Every month *PCFormat* comes with either two CDs or one DVD.

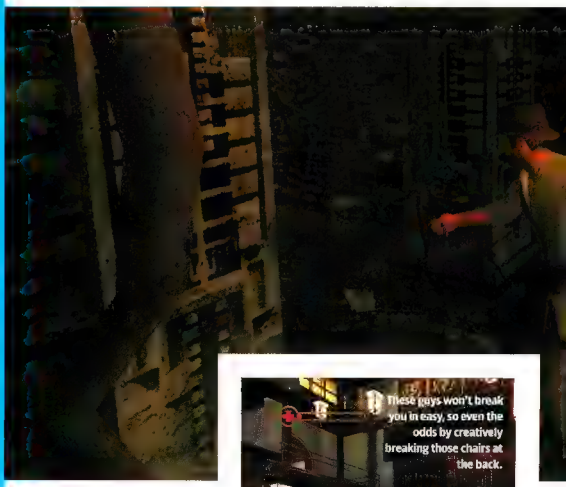






FULL PROGRAMS

We've excelled ourselves once again, and this month have rounded up half a dozen full programs (seven if you bought the DVD version). With this month's discs you can create screensavers, design 3D text, keep out net nasties, track a stolen PC and much more



ADVENTURE

INDIANA JONES AND THE EMPEROR'S TOMB

It's the Man in the Hat's greatest PC adventure yet, and now you too can have a (whip) crack at it.



Needs P1-600 128Mb 32Mb 3D card

There are some things that you're not meant to ask. Why it is that these temples can survive thousands of years' worth of neglect, but not five minutes of exploration? How could these ancient civilisations have perished, given the powerful artefacts at their disposal? And, of course, if you're the first person into the tomb for many centuries, where did the Uzis and the shotguns came from?

They're all valid questions, but why, Doctor Jones, are you wasting time worrying about them when you could be whipping the evils of the Third Reich into a pulp? In this huge demo you begin in a collapsing temple, fighting against a team of evil ivory hunters. As opposed to good ivory hunters who harvest tusks in an elephant-friendly manner, obviously.

You'll quickly see that casually flailing away at these antipachydermic brutes only gets you killed. A powerful combination system and wide range of weapons rewards the tactical player both with survival and some of the most filmic fighting ever seen. You can even smash foes into tables, and pick up a chair as a makeshift weapon. Of course, the arsenal of anachronous and strange weapons, and then there's your whip that you use for everything from impromptu circus stunts to knocking guns out of hands (maybe) to accurate carpet measurement (highly unlikely.)

And you need all these skills to survive the next area, as you recline your way across the mysterious Far East to China. Here you'll test your skills against a team of ninjas and the deadliest kung fu fighting men in black since Agents J, K and Smith. Now practise with me 'grabs for sacred ancient tchotcke, is clubbed to ground, "it belongs in a museum!"

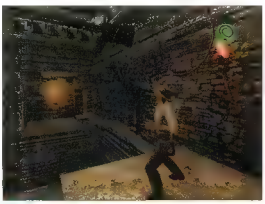
Ah, Indy, we've missed you. **PCF**

CONTROLS

Forward	[W]
Backward	[S]
Use/hug wall	[E]
First-person mode	[C]
Control camera	[Mouse]
Attack	Buttons

>>IN LIKE INDIANA

Prepare yourself for some whipping yarns



01 What would Indy be without his whip? (Don't say, 'Lara without a bad back.') Select the trademark, glance up at a protrusion and hold the left mouse button to swing through the air with the greatest of ease. Press [W] and [S] to keep it up.



02 Beware the many traps in the temple. Luckily, they aren't too dangerous – but be prepared to swing if you see a cracked floor. By the time you reach the end, you'll have done everything from swimming to jumping – and still kept your hat!



03 Of course, you're not the only one raiding the temple. When a fight starts, move the mouse to keep the enemies in view, with the buttons handling punches and the [E] key grabbing props. Or just pull out your revolver and open fire.

SHOOT-EM-UP

TOP GUN: COMBAT ZONES

No Tom Cruise, unfortunately, so you'll have to create your own homoerotic subtext.



Take on bombers from a distance, because you get a pasting up close.



We suspect this sort of inspirational HUD message was mandatory in the Reagan era.

[illegible]
[illegible]
Needs P[illegible] 450 128Mb 3D card

Fans of eighties nostalgia are having a field day at the moment, with all manner of hairspray-heavy concepts being dragged on to your PC. With the varied flavours of *Vice City*, *Knight Rider*, it's almost as if the eighties never left! Which means we're sitting in a pink-and-grey wallpapered room shovelling floppies into the maw of an Amiga, so we shouldn't pursue that too closely.

Anyway, *Top Gun: Combat Zones* offers a storming slice of old-school arcade action, sending you out against swarms of helicopters and incoming bombers with a spot of ground strafing thrown in. Playing couldn't be simpler, just point yourself in the direction of your enemy and hit [Right Ctrl] to open up with tracer fire or [Right Shift] to launch one of your limited selection of missiles. Be prepared to throw yourself around, though, because while attackers don't chase you, they're good shots and do lots of damage. **PCF**



Avoid head-on combat, or you rapidly take a lot of damage.

MANAGEMENT

AIRPORT TYCOON 2

Get ready to reduce house prices for a 10-mile radius.

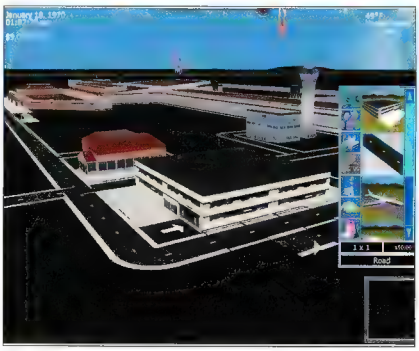
Gathering
[illegible]
Needs P[illegible] 600 64Mb 32Mb 3D card

Flight sims are all well and good, but while it can't be denied that keeping a thousand-ton lump of metal in the sky requires a certain finesse, it would all be for nothing without a suitably robust slab of concrete to land on. And, of course, a few facilities for overcharging for food, losing luggage, and subjecting journalists to invasive security checks.

Alas, *Airport Tycoon 2* doesn't offer quite that much detail, but you can arrange runways, terminals and control towers to your heart's content in this fine demo. You get a year in Tokyo to prove your runway-building prowess, so click on New Game, then on Asia on the map. Choose a plot of land big enough to put a runway on, and crank up the game speed for rapid construction. Once enough facilities are in place, you're approached with business contracts – keep an eye on the walkie-talkie icon – and you can start raking in the money. **PCF**



Observe tiny planes landing and being served by tinier baggage and fuel carts.



Not shown: long-stay parking prices only fractionally less than the value of your car.

REAL-TIME STRATEGY

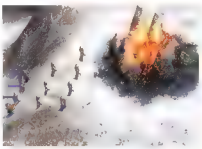
AGE OF MYTHOLOGY: THE GOLDEN GIFT

Get down and deity with this tale of dwarves and Norse gods, in an exclusive expansion pack for AoM.

Microsoft Game Studios
www.microsoft.com/games/aoe/mythology
Needs PII-450, 128Mb, 16Mb 3D card, Age of Mythology

Buying presents for strangers is never other than problematic, particularly if they're all-powerful deities with monstrous powers over the world of men. While this may not have been a part of your last Christmas shopping experience – you didn't have to buy anything for our publisher, for example – you can investigate the tensions involved in this bonus campaign for Ensemble Studios' excellent *Age of Mythology*.

A preview to the narrative of the main game, it has you steering the diminutive forms of dwarven brothers Brokk and Eitri across some myth-infested landscapes. You need to start by getting the brothers from their respective villages, which poses some distinct challenges. Brokk has a substantial Norse camp between him and his destination, but a shortcut is available if you're prepared to spend some time rounding up cattle for a neighbour Eitri's marooned on an island with enemies on both sides, so you need to get nautical on their ass – get a good armada and a few krakens, and prepare to get wet. Just watch out for Atlanteans and take care not to sail off the edge of the world. **PCF**



"Sorry, vengeful dwarves go by the tradesman's entrance (the pit of Hades.)"



It's rarely a good idea to take family advice from strange old men who wander in out of the snow.



Fighting earns you the favour of the gods, so keep those axes flying.

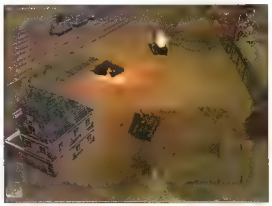
>>MORE, WE WANT MORE!

More chunks of fresh meat to sate your leonine appetites.



CHAMP MAN 4 ENHANCEMENT PACK 2

Football for breakfast, football for lunch – you'd even have it as a lover if it weren't anatomically impossible. The next best thing is this latest enhancement pack – or 'patch' to us fancy-free laymen – which fixes a shedload of those unfortunate bugs and sloppy programming glitches that plagued *Championship Manager 4*. Go forth and relegate.



WORLD WAR II: FRONTLINE COMMAND

WW2 seems to be this year's replacement for the mysterious sci-fi conspiracy that's dogged game plots for far too long. Now it's time for the uniquely talented Bitmap Brothers to take stab at trenchfoot times, in the form of a visually lush real-time strategy game. Take on the Hun in this tank-packed demo.



THE STARS: BEHIND THE SCENES OF VICE CITY

To tie in with our exclusive review of *Grand Theft Auto: Vice City*, Rockstar Games has philanthropically provided us with a making-of video of the famous cast recording voices for the game. Look out Dennis Hopper, Luis Guzman, Gary Busey and, cough, Jenna Jameson, among other silver-screen luminaries.

PCFormat EXCLUSIVE

DEMONSTAR

It's back to the penny arcade machines of yesteryear with this full vertical sci-fi shooter.

Needs 486, 16Mb

Left, right, up, down, shoot. Crikey, if only everything was so simple. We have a secret soft spot for hearts-on-their-sleeve, bigfunpop arcade shooters like this. The full version of *DemonStar* on this month's disc is pure retro through and through, embracing the too-often forgotten tradition of stupidly large enemies and guns to match.

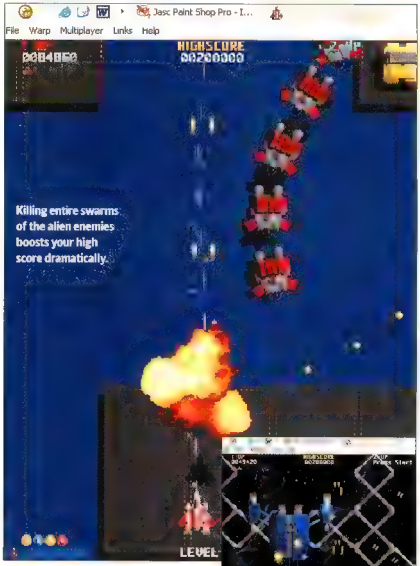
The concept is simple – Earth is being attacked by nasty aliens and you have to defend it. To do this, you're given a lightning fast spacecraft that's equipped with a fairly puny weapon and a couple of bombs. Using keyboard, mouse or joystick, navigate your ship around the ever-upward-scrolling screen and shoot anything you see into dust.

As we mentioned, your gun is quite limited. The solution is to look out for certain enemies and floating crates that drop power-ups when destroyed. There are three different types of weapon – yellow, blue and red, for simplicity's sake – each of which has about five different levels, so pick up five blue power-ups and you end up with a ridiculously powerful gun. However, if you're using the red gun, for example, picking up a power-up of another colour sets your gun back to the first level of the new colour. All the power-ups sporadically change colours while they're on the screen, so wait long enough for it to transform into the colour you're looking for before picking it up.

Of course, if you die then you're back to square one, weapons-wise, so try to hang on to your big guns because you'll need them for when you encounter some of the biggest bosses you'll have ever seen. **PCF**



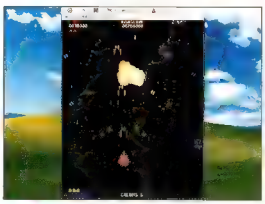
Press [Space] or the right mouse button to chuck a bomb. These are massively destructive, but in short supply.



***DemonStar* also supports multiplayer modes with two-players on one machine or over a network.**

>>LASER SQUAD

The skinny on the different weapons available in *DemonStar*.



01 **The yellow gun is the default and once it's at maximum power, it's the best if you're not very good at evading enemies. It spews out fairly weak shots in all directions, which is good for taking out peripheral foes, but it isn't great against bosses.**



02 **Blue is a good compromise between power and spray area – several fairly destructive parallel beams shoot out, and careful strafing can spread them around the screen quite effectively, although your sides aren't covered.**



03 **Red is the big bastard raw power gun. There's no side fire, just one huge killer beam that can pretty much only handle whatever's straight ahead of you. It's ideal in boss fights, but requires good reflexes against swarms of smaller enemies.**

PC FORMAT EXCLUSIVE

ARCADE BLOWOUT!

Try eight more massive demos from the creators of *DemonStar*.

Needs P[illegible] 33, 16Mb

There may be 18 massive, addictive levels in *DemonStar*, but that won't stop you craving more before too long. With that in mind, we've teamed up with developer/publisher Mountain King Studios to bring you fully playable shareware versions of eight more of their games, many of which are in a similar vein to *DemonStar*.

In fact, one game, *DemonStar – Secret Missions 1*, is the quasi-sequel to our exclusive full game. It's basically the same – a non-stop arcade vertical blaster, with enemies and power-ups aplenty – but with vastly improved graphics and sound. It's like visiting an old, much-adored girlfriend and discovering she now has supermodel looks. In fact, it's so beautiful that you may want to consider registering to receive the full game, complete with more levels, baddies and graphics.

The same is true of the other seven games on the disc, some of which are arcade blasters, some of which are strategy games, and one of which is even an arena-based futuristic sports gameshow jobbie. Registering also enables you to download free bonus missions for the games from **www.mking.com** – you'll even find a few for the original *DemonStar* there as well. Prices of the games range from $12.95 (about £9) to $20 ($12), and you can either download them directly so you don't have to wait, or you can order them on CD for a bit of extra cash. **PCF**



Indulge in some *R-Type* nostalgia with the side-scrolling *Intensity XS*.

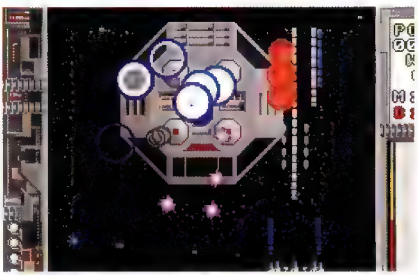
THE BIG LIST

Here's all eight of the Mountain King games...

DemonStar – Secret Missions 1
Raptor
Galactix
Intensity XS
Swarm Assault
Swarm Rampage
Juno Nemesis
Hypertron 2



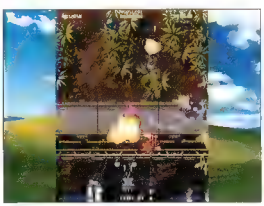
***Raptor* won shareware game of the year back in 1999, we'll have you know.**



***Galactix* was Mountain King Studio's first ever game, and clearly the inspiration for many of its subsequent titles.**

>>THREE OF THE BEST

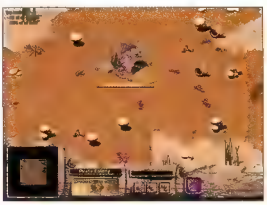
The cream of the crop from the eight Mountain King shareware games.



01 **If you enjoyed the free full version of *DemonStar* on this month's coverdisc, you'll love this graphically-upgraded, higher resolution edition of the game, featuring even more alien baddies and locations.**



02 **Think of an insane hybrid of *Smash TV* and *Asteroids* and you're somewhere near the madness of *Hypertron*. Set in a 3D arena in a TV studio, you're quite simply charged with shooting everything in sight before they get you first.**



03 **This entomological title is certainly not one for anyone who's afraid of insects. Unlike many of the others here, *Swarm Assault* is a strategy game, in which you control hives of ants and lead them to war against dozens of rival scuttling things.**

PCFormat EXCLUSIVE

ACTIVE MEDIA ECLIPSE 4.1

Liven up your desktop with the Developer edition of this powerful screensaver creator.

Active Media Technology Ltd
www.active-media-online.com
Needs 16Mb Windows 95 or later
Status Full professional edition £63
Serial number None required

Think screensavers are just the relic of a time long ago when monitors suffered first-degree burns if you left them on for extended periods? Then you're in for a surprise when you run the Developer version of *Active Media Eclipse 4.1*.

What will also amaze you is the effectiveness and complexity of the screensavers *Active Media Eclipse 4.1* enables you to create in a matter of minutes. We're not just talking simple coloured screens with a little random movement. Instead there's a whole raft of settings you can customise. You can also include sound or film clips.

Basically, what you do is build a 'project' (the underlying file that contains all the details which will go on to become the screensaver). As the first step in this process, you select one of the effects (called transitions) and then apply however many graphics the transition requires. After this, you preview your screensaver, then fiddle with the transition settings until you get them right. All of this constitutes one module. You can then add another nine, so your screensaver can be as complex or as simple as you want. When you've got this far, you generate the screensaver for use on your own PC. Alternatively, you can create a self-extracting file for distribution on a floppy. When the recipient double-clicks this, the screensaver is installed in the correct Windows directory and automatically enabled – there's no need to have *Active Media Eclipse 4.1* but what a shame not to. **PCF**



This is the Invaders transition in operation. Want to shoot up your boss? When you apply this to your screensavers, you can replace the graphics with your own piccies.

CLARIFICATION

Please note that this is the Developer edition (version 4), incorrectly described as the 'pro' version on our bag. Many apologies for any inconvenience caused.

UPGRADE

READER OFFER!

Get Professional for half price!

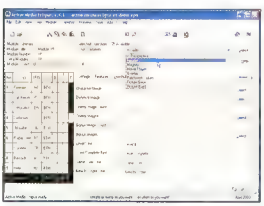


Upgrade at www.active-media-online.com now!

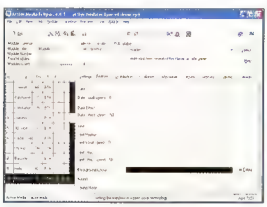
If you enjoy the Developer edition, why not upgrade to the Professional version for half price? Added features include the ability to make fully branded screensavers with no Active Media logos, unrestricted sale or licensing of your screensavers and much more. Active Media is offering *PCF* readers the Professional Edition for £95, a saving of 50 per cent. To upgrade, visit Active Media's website, email **upgrades@active-media-online.com** (quoting *PCFormat* 149), or write to Active Media Technology Ltd, Crewe Hall, Crewe, Cheshire, CW1 6UL.

>>SAVE OUR SCREENS!

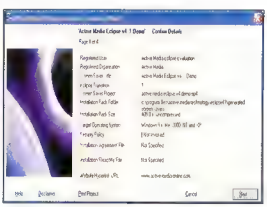
Use up those unwanted graphics on your hard disk – turn them into screensavers.



01 **The backbone of *Active Media Eclipse 4.1* is its 35 transitions. Some are more specialised than others but there's something for everyone. Select one, then fiddle with the settings below it.**



02 **Transitions primarily use images to achieve their effect. Hit the lower Select buttons where appropriate, then choose one. Now work your way through the other tabs, customising the module.**

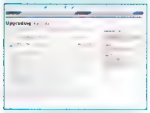


03 **Create extra modules if you want, in line with the previous two steps. To create your screensaver, hit the Create button in the toolbar and work through the wizard. And that's it!**

UPGRADE

READER OFFER

Treat yourself to a huge discount on *Xara 3D 5*.



Go to www.xara.com/x3d3upgrade.asp?p=future to upgrade to *Xara 3D 5* for around £21.

Not only are we giving away a fully functional copy of *Xara 3D 3.04* on this month's coverdisc, but (after you've registered your copy and only for a period of 60 days) you can also upgrade to *Xara 3D 5*, the latest version, for 25 per cent off the normal price.

Xara 3D 5 has loads of new features. You get buckets of new animations and you can export your animations to *Flash*. Also, you can create animated 3D screensavers and turn headings into buttons. You'll even get a free copy of *Webster*, so you can create your own 2D shapes and export them into *Xara 3D*.

3D GRAPHICS

XARA 3D 3.04

Create animated 3D text in (almost) less time than it takes to read this.

Xara
www.xara.com
Needs Windows 95 or later
Status Full product as sold for £29
Serial number None required but register at www.xara.com/x3d3offer.asp?p=future for upgrade offer



There's no such thing as a blank screen in *Xara 3D*, so what you get is sample heading text. Replace this with your own, then mess around to get the desired effect.

PC feeling bloated? It's not surprising when there's so much bloatware about – apps which are so large and complex they take ages to install, occupy staggering amounts of hard disk space and have so many features you'll only ever use a tiny percentage of them. Even those features you do use can take ages to get to grips with. This is especially true of 3D apps, which are notorious for taking so long to strut their stuff that you have time to read *War and Peace* in the original Russian.

Xara 3D is the opposite of this – it's so streamlined and miraculously simple to use, you almost can't go wrong. To create animated, 3D text headings, you just overtype the sample text which automatically appears with your own, then change some simple settings to get the effect you want. There is a dedicated text editor you can use, but the software is so intuitive you hardly need to. You can rotate the text by dragging with the mouse, and to resize it, you can either specify a new point size or just resize the window. You also get full control over advanced features such as tracking. You can go on to adjust the beveling, extrusion, shadow and just about everything else you can think of.

This is probably the easiest-to-use program in the universe but the output looks superb and only takes a couple of minutes to achieve **PCF**



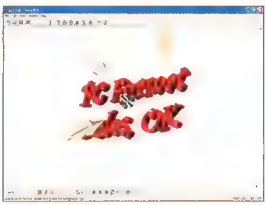
Type in your own text and then fiddle with the settings in the toolbar at the base of the screen (or the text editor) until you get the result you want.

>>GETTING ANIMATED

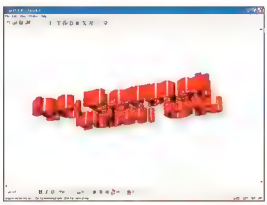
Make your 3D heading look even better with these really cool special effects.



01 **Once you've got your basic text looking the way you want it, there are loads of other things you can do to it. For instance, you can change the text colour or extrusion, or you can apply a background texture.**



02 **You can also vary the lighting and shadow effects. Hit the lamp bulb icon in the upper toolbar and then drag any of the pencil thingies to change the lighting. Alternatively, drag the disk in the middle to alter the shadow.**



03 **What more can *Xara 3D* give you? Animation. Get your text as small as possible, then fiddle with the animation settings. Hit [Ctrl]+[Space] to preview it. Finally, export your work of art as an AVI or animated GIF.**

ANTI-VIRUS

MAIL VIRUS BLOCKER 1.01

Stamp on those nasty buggers that accompany email with this handy little app.

Needs Email client. Win 95 or later
Status Full product as sold for £20
Serial number Register at www.ashampoo.com/frontend.registration/php/trial_step1.php?edition_id=285 for a free Trial Key

Do you think 'I Love You' and 'Melissa' sound like something you might see written on a Valentine's Day card? Then you need *Ashampoo Mail Virus Blocker*. Actually, you probably need it even if you do know that these are viruses which have infected millions of PCs.

There are zillions of viruses out there, many of them spread as email attachments. *Outlook Express* has at least two virtues as an email client – it's free and it's easy to use – but it doesn't do much to prevent email-borne scripts from infecting your PC, or to stop you from running them. Other POP3 email clients offer a higher level of protection. For example, *Outlook 2002* refuses to let you send or receive any attachments which Microsoft has determined are dangerous. This blanket approach is better than nothing, but it prevents you from making your own mind up about whether an attachment is harmful.

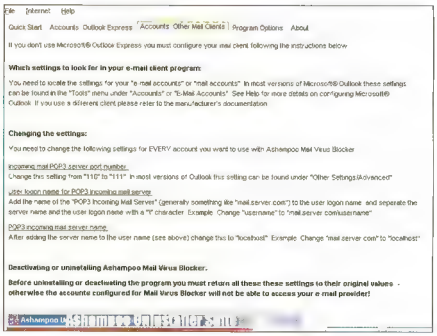
Enter *Ashampoo Mail Virus Blocker*. Whatever POP3 email client you use, *Mail Virus Blocker* acts like a sort of firewall. It identifies potentially dangerous attachments before they reach your email program and then either deletes the message or renames the attachment, according to the options you set. Renaming attachments stops them from running, so this is pretty effective. If you've set up *Mail Virus Blocker* to run with *Outlook 2002*, you can download any attachments you want – because they're renamed, *Outlook* lets them through. **PCF**



Go to www.ashampoo.com/shop/0021/upgrade to get *WinShampoo* for around £27.



You have to configure *Virus Blocker*, so read the blurb for startup information.



If you use another POP3 client, such as *Outlook*, you have to go into its Accounts settings and make some manual changes. Hit Accounts: Other Mail Clients for details.

UPGRADE

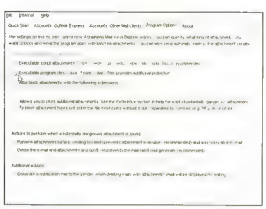
READER OFFER

Treat yourself to a discount on *WinShampoo*.

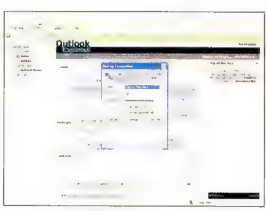
Not only are we giving away a fully functional copy of *Ashampoo Mail Virus Blocker1.01* on this month's coverdisc, but (after you've registered) you can upgrade to *WinShampoo* at a specially reduced price. This consists of the *WinOptimizer* and *Uninstaller* suites. *WinOptimizer* enables you to fine-tune PC performance, while *Uninstaller* creates handy snapshots of your system, before and after you install programs.

>>BLOCKING DODGY ATTACHMENTS

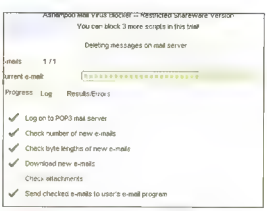
Now's the time to get serious with unwanted email attachments.



01 **By default, *Mail Virus Blocker* only deletes script attachments. If you also want to target executables or other files, hit the Program Options tab and fiddle to your heart's content.**



02 **Now fire up *Outlook Express* or any other POP3 email client you've set up for use with *Ashampoo Mail Virus Blocker*. Log on in the usual way – there's almost no additional delay.**



03 ***Ashampoo Mail Virus Blocker* has put on its blue suit with red underpants and now leaps into action, so any dodgy attachments on your ISP's server will be dealt with before they get to you.**

FINANCES

TAXCALC 2002 HOME

DVD ONLY

Avoid a fine by completing your tax return early, with the help of Intuit's intuitive software.

Needs Win 98 or later, CD-ROM drive, printer
Status Full program as sold for £25
Serial number None required
Limitations Currently supports 2001/2002 tax year only (see www.taxcalc.com/support/update.htm for updates)

Now we're well into the new financial year, anyone with even slightly complicated financial affairs should have received something very scary: their tax return. You know it needs to be completed, but somehow, it's all too easy to put it off. By the time you receive all the documents you need from your employer and bank manager, it's already summer. There are days out to be planned, holidays to be taken. October creeps up on you and you've already missed the first deadline. But there's plenty of time yet. Of course, by December, you're hardly going to do your tax return when there's Christmas to sort out. Finally, January arrives and there's a last minute panic. Miss this deadline and it's a £100 fine.

There is, unsurprisingly, a better way. *TaxCalc 2002 Home* offers all the assistance you need to calculate and print out your return, along with tax-saving tips that could save you money. To get started, click on **Start a new tax document now** and double-click **Personal details section**. Select **Personal details** to fill in your name, address and so on, while **Tax return details** requires information found on the front of your return (tax reference, employer reference and so on).

Perhaps the most important tax-related tip anyone can ever make is to get assistance if you're not sure about something. *TaxCalc 2002* features an excellent Help system and you can just press [F1] for context-sensitive help on the current page. Get into the habit of doing this, even if you think you understand the form – it's important to get the figures right. And as most people pay too much tax, doing so might cut your final bill.

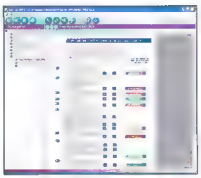
It's also vital to cross-check the final return once you've printed it. In particular, make sure you have paper copies of each on-screen form you've completed. And the most common problem of all is people forgetting to sign the return, so don't fall for that trap. When you're happy the form is correct, turn to the final declaration section, then add your signature and a date. Finished. Until next year. **PCF**



***TaxCalc* uses a simple, browser-like interface, with Forward and Back buttons to help you move around. It couldn't be more intuitive if it tried.**



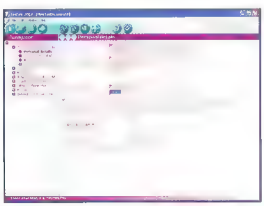
Registering *TaxCalc* isn't compulsory but only registered users get support.



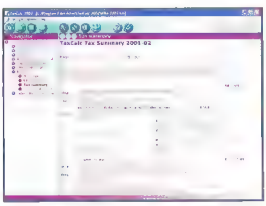
The forms *TaxCalc* prints look exactly the same as a regular tax return.

>>COMPLETING YOUR TAX RETURN

It'll never be a barrel of laughs but at least *TaxCalc* makes it hassle-free.



01 **Launch *TaxCalc*, then select Start a new TaxCalc document now. The Navigator at the left represents your tax return. Double-click on Personal details section, then click on Personal details to start adding some basic info.**



02 **As a minimum, most people need to complete relevant parts of the Income section. You may not have all the data ready to hand, but selecting Review → Tax Summary gives you an idea of what your final tax bill is likely to be.**



03 **When you've finished the document, select File → Print tax return forms, then choose Print selection of forms and select the pages you need to print. Check the printouts carefully – you're responsible for any errors.**

DIAGNOSTICS

HOT CPU TESTER 2 PRO

CPU getting uppity? Push it to the limits with this handy diagnostic app.

UPGRADE

READER OFFER

Boost diagnostic power with *Hot CPU Tester Pro 3*.



Go to www.7byte.com/purchase.htm to buy version 3 for around £14.

Not only are we giving away a fully functional copy of *Hot CPU Tester 2 Pro* on this month's coverdisc, but you can upgrade to *Hot CPU Tester Pro 3* too.

Apart from loads of improvements to existing features (for example, it works with Pentium 4 and AMD Athlon XP chips), it has a new interface, offers full technical support and has an automatic update feature. All the modules have been redesigned and you also get several new ones as well.

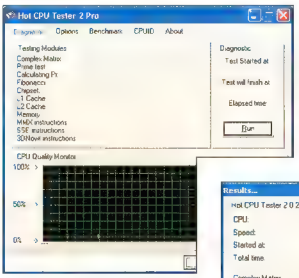
7Byte.Com Ltd
www.7byte.com

Needs Chips up to Pentium III
Windows
Status Full product as sold for £12
Serial number None required

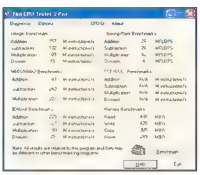
PC working as it should? Unfortunately, things may not be as hunky-dory as they appear. Hardware can fail at any time, though it usually turns up its toes very soon after you've just started using it or after thousands of hours of use. Either way, it's a major pain, not least because you might well end up losing all your data, which is no one's idea of fun.

Even if you've kept full backups, it can still take days to get up and running again. The upshot of all this is that if a component is going to die at some point in the future, it's probably better to have it do it now when you know everything is backed up. This is especially true if your machine is still under warranty – you can get the crap component replaced without having to fork out any more money.

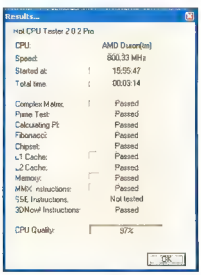
Enter *Hot CPU Tester 2 Pro*. What this useful little app does is compress the wear and tear that PCs undergo over a period of time into a few hours (six is the minimum for an effective test). It doesn't do this with nasty programming tricks – instead, it uses operations that programs perform as a matter of course. *Hot CPU Tester 2 Pro* tests various components, including the CPU, but also the motherboard and memory. If your system has any lurking or intermittent gremlins, this app should flush them out. **PCF**



Back up your data and close any open programs. Fire up *Hot CPU Tester 2 Pro*. The app performs various tests but they're multithreaded so they run together. Hit the Diagnostic tab, then Run to get started.



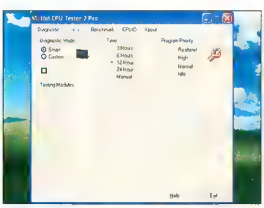
You can benchmark your system too. Simply hit the Benchmark tab and then click on Benchmark.



You have to run *Hot CPU Tester 2 Pro* for hours (the default is 12). When it's been running for a while though, you can hit Stop to see the results so far.

>>JUST TESTING

Hot CPU Tester 2 Pro works fine out of the box, but you can fine-tune it if you want.



01 If you have an irresistible urge to fiddle with *Hot CPU Tester's* settings, hit the Options tab. You can change how long the app operates – Manual runs it until you tell it to stop.



02 There are two Diagnostic Modes: Smart and Custom. Smart works well, but hit Custom if you want to deactivate individual tests. You can also change the Program Priority (High is recommended).



03 As it works, *Hot CPU Tester 2 Pro* collects data about your CPU. To see what its verdict is, hit the CPUID tab. For more details, hit the Feature Flag button and prepare to have your mind boggled.

PRIVACY

SPY CLEANER 6.1

Everything you need to stop spyware from siphoning off your personal information.

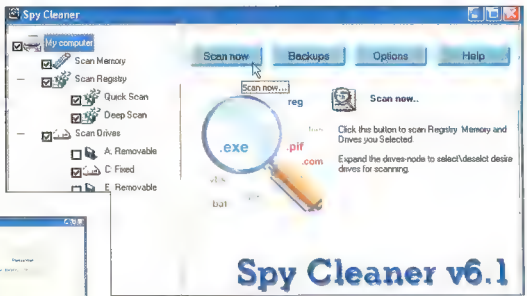
Topdownloads Networks Inc
www.spycleaner.net
Needs 16Mb, Windows 95 or later
Status Full product as sold for £6
Serial number None required

Feel like everyone's out to get you? They probably are. Well, not so much you as your confidential data. There are people out there who are champing at the bit to get hold of your personal information, either for their own ends or to sell it on for various unscrupulous purposes. There are loads of programs (some concealed in programs you download from shareware websites) which can leave spyware components on your system's hard disk, within the Registry or temporarily stored in memory.

If you're concerned about preserving your privacy, the last thing you want is spyware sending information about your surfing habits to advertisers and lumbering you with even more unwanted ads on your PC. Even if you're not overly bothered about privacy, it's hard to come up with a single justification for putting up with this sort of rubbish.

So how do you get rid of it all? *Spy Cleaner 6.1* makes it easy by finding all kinds of spyware, including DLL files. Although you can set it up to delete these automatically, it's probably better to manually delete any spyware components. This way, you can opt to back them up and retrieve them later, if you ever need to.

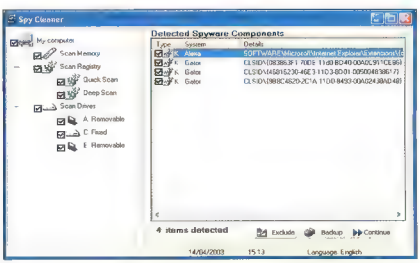
With *Spy Cleaner 6.1*, you also get *SpyMonitor*. This useful utility sits in the background and prevents spyware from getting a foothold on your system in the first place. **PCF**



From the options on the left, select what you want the app to scan. Deselecting the Memory, Registry or Hard Disk options isn't recommended. Hit Scan Now to begin the process.



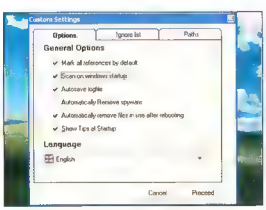
When a scan is complete, hit Show Log for details about what was found, or hit Continue to move on to the next stage.



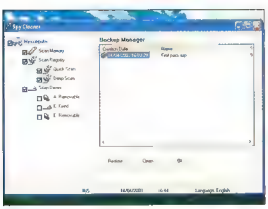
Chances are *Spy Cleaner 6.1* will have found some unwanted entries. Hit Backup if you want to back up entries before deletion, then Continue to squash the critters.

>>I SPY

Spy Cleaner 6.1 is staggeringly easy to use but there's more to it than meets the eye.



01 **Hit Options on the main screen to make any changes to the way *Spy Cleaner 6.1* works. You can have it automatically remove spyware but don't select this if you want to back up entries first.**



02 **If you opted to back up entries, you can restore them. Hit the Backups button on the main screen. Select a backup entry and hit Restore, or select Clean to delete entries you no longer want.**



03 ***SpyMonitor* nukes spyware before it's even downloaded. Fire it up, then right-click its icon in the System Tray. Hit Preferences to change the settings. Priority setting controls scan frequency.**

SECURITY

PC TRACKER PRO

Worried that your PC might fall into the wrong hands? *PC Tracker* will look after it.

PASSWORDS

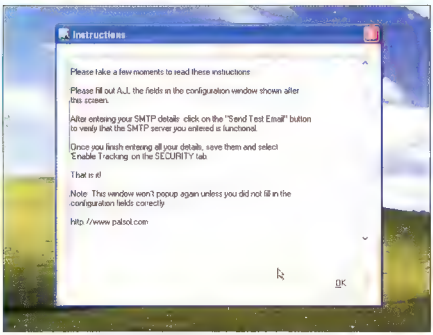
PROTECTED ACCESS

Make *PC Tracker* secure by using a smart password.



Once you hide *PC Tracker*, no one will know that it's running on your PC.

With *PC Tracker* in the background, you need a way to restore the configuration utility to modify the settings, temporarily switch tracking off or to uninstall it. Press [Ctrl]+[Alt]+[P] to bring up the log-in. Enter the password you chose when you set up the program and click OK. You now have full access to *PC Tracker*. Switch to the Security tab and click **Disable Tracking**. Click **Save** to finalise this change. You can use the **Uninstall** button to remove *PC Tracker*



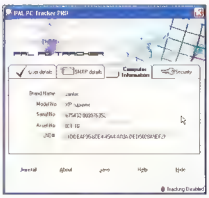
You should only see the instruction dialog once, unless you haven't followed it properly.

Needs Windows 98/ME 2000/XP
Status Full program as sold for £29
Serial number None required

With computers becoming increasingly portable, it's only natural that you'll want to keep yours safe. But if the worst happened to your PC, it would be nice to know that you could track it down or get someone else to trace it for you

Conventional advice is to mark valuable property with your post code and house number, but this procedure has its drawbacks. Even if you use ultraviolet pens, this method obviously relies on someone trustworthy actually seeing your markings

A much better way to recover your property is to get it to phone home, which is precisely what *PC Tracker Pro* does. When you install the program, you give it details of your email address and SMTP server. You also provide basic



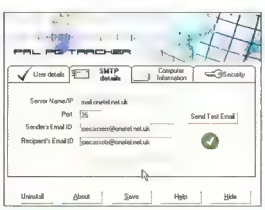
Use the Computer Information tab to record serial numbers and other identifying data.

information about the computer to help you prove that it's yours. Once set up, the software runs in the background, entirely invisible to anyone using your PC. However, as soon as anyone powers up your PC and connects to the internet, *PC Tracker Pro* sends you an email, giving the current IP address of whoever is online, which you can use to help work out who's using your PC

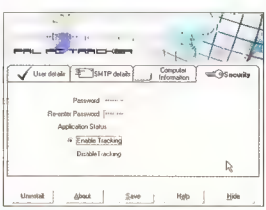
It doesn't stop with an email to you, though. *PC Tracker Pro* also contacts PAL Solutions' servers with the same information. This means that even if you can't access your email, you can still find out where your missing PC is, or if someone is using your computer without your permission, simply by giving PAL a call. **PCF**

>>"BOSS! BOSS! I'VE BEEN NICKED!"

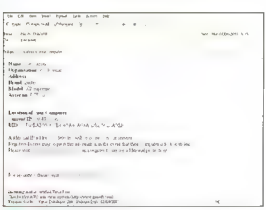
Give your PC the equivalent of a radio tracking device.



01 **When you first run *PC Tracker* you need to input some basic information. The most vital are the details of your ISP's SMTP server. Press Send Test Email to check you've entered these correctly.**



02 **On the Security tab, make sure you've entered a password and chosen to enable tracking. Now click Save and Hide to run *PC Tracker Pro* in the background.**



03 **Whenever your PC starts up and connects to the internet, you're sent an email that includes the current IP address of your computer. If someone else is using it, you'll know about it.**

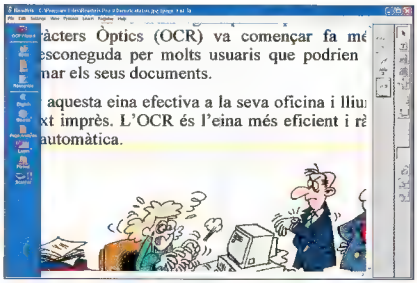
OCR SCANNING

READIRIS PRO 8

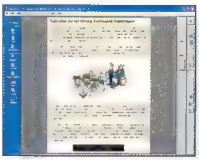
Eye-spy the perfect way to take control of your important documents.

Needs Pentium, 32Mb, scanner
Status 30-day trial
Serial number None required

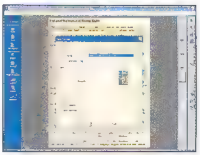
Free your words from inconvenient paper with *ReadIris* – a professional OCR package capable of doing anything from pulling content from your scanner to converting locked PDFs into editable documents. Simply plug in your scanner, insert the page that you want scanned, and click on the **Scan** or **Open** button (to the left of the screen, and swapped with the **Source** option) to begin the import process. *ReadIris* breaks up the page into its constituent parts so that you can choose to scan in only the relevant sections, and ignore the bits you don't want. It can tell pictures from text, too. You're not limited to English documents, either, with support for French, German, Greek and even Swedish. Sample documents are provided with *ReadIris* so you can give it a try even if you don't own a scanner. This demo times-out in 30 days, but you can purchase the full version for £129 (call Widget on 01438 818800 or Softline on 01883 745111) or the special web price of £103 from **www.readiris.com**. Or you might be lucky enough to win a copy if you enter the competition below. **PCF**



***ReadIris* deduces which parts of a page are important text and which are graphics.**



It's all Greek to us, quite literally, but that won't stop *ReadIris* from pulling it into digital format.



The OCR Wizard automatically launches when you load *ReadIris*, and controls exactly how the app works.

PCFormat COMPETITION

WIN THE ULTIMATE SCANNING KIT

Scanners and software could be yours by answering a simple question.



This month, you could walk away with everything you need to take control of your vital information with our scanning giveaway. First prize is a copy of the complete, unrestricted *ReadIris Pro 8.0*, with a superb IRISPen. This handy little gadget is perfect for your pocket, scanning in anything you need as easily as if it were a highlighter pen. Second place winner also walks away with *ReadIris Pro 8.0*, and an Iris Business Card Reader to make tracking your contacts a snap. Finally, eight runners-up will each receive a copy of *ReadIris Pro*. To be in with a chance of winning, head to



www.pcformat.co.uk, follow the link and answer this simple question...

What does OCR stands for?

a) Original character recognition
b) Optimised capture routine
c) Optical character recognition
d) Objective conversion robot

TERMS & CONDITIONS

1. Employees of Future Publishing, Iris, their agents or families are not permitted to enter this competition.
2. No correspondence will be entered into. The editor's decision is final.
3. Entries must be in by 26 June 2003.
4. No purchase is necessary.
5. Only one entry per household.
6. The names and contact details of entrants may be retained for marketing purposes, unless you click the box on the entry form.
7. The winner will be the first correct answer selected at random from all of the entries and will receive a copy of *ReadIris Pro 8.0* and an IRISPen, the second prize winner will receive *ReadIris Pro 8.0* and an Iris Business Card Reader, and eight runners-up will receive a copy of *ReadIris Pro 8.0*.
8. Winners notified by email or phone.
9. We reserve the right to substitute an equivalent prize of equal value.

IRIS Document to Knowledge™

BRIDGE THE GAP

WHAT YOU'VE BEEN MISSING...

3CDs OR DVD

Complete your collection of *PCFormat* the easy way.
Fill out the form and you'll die happy...

PCF148 May 2003



Inside
The truth about games / Interfaces of the future / PCF Hub

On the CDs
Showshifter1.55 / Instant CD/DVD / Champ Man 4 / Freelancer

DVD extras
Firegraphic XP 4.0 / BBC Audio Books / Games add-ons

PCF147 April 2003



Inside
Comics-to-games / Radeon 9800 / Wi-Fi security exposed

On the CDs
Two full games / *Enigma / Tropico 2 / Serif DrawPlus 4.0 / MovieJack 2 VCD*

DVD extras
VFR Photographic Scenery / Enigma / Royalty-free photos

PCF146 March 2003



Inside
The future of the PC / Audio special / Copy DVDs / *Unreal II*

On the CDs
TOCA Race Driver / Praetorians / Anno 1503 / TrueSpace 3.2 / Rave eJay

DVD extras
World Empire IV / Gram /100 essential programs

PCF145 February 2003

Inside
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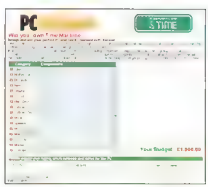
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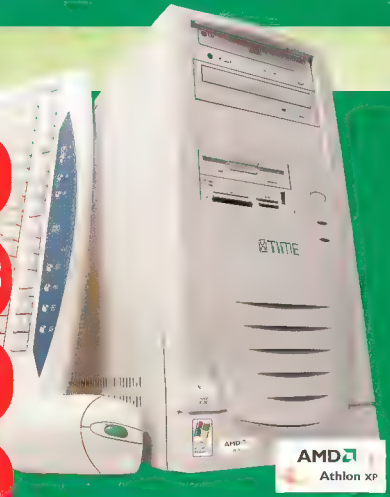
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Internal drives

Your PC is stronger, faster and capable of more things than ever before, which might mean it's starting to feel a little constricted. **Mike Williams** decides the best way to give it some space.

Even your granny knows that when it comes to PCs, whatever you buy becomes obsolete about 15 minutes later. However, hard drive developments seem to have been few and far between recently. Many of the plus points we look for in a good drive (7,200rpm spindle speed, 8Mb buffer, fluid dynamic bearing motor to keep it quiet) are based on technology that's been around for a couple of years.

In theory, that should all change when the brand new serial ATA (SATA) drives arrive. Along with a faster external interface (150Mb/s, as opposed to the 133Mb/s offered by ATA/133), SATA drives mean we can finally say goodbye to the IDE master and slave nonsense. And because each SATA port uses a single point-to-point connection, there's no bandwidth sharing with other devices on the same channel.

In practice, though, manufacturers aren't rushing to produce SATA drives. Even when they are, some companies (such as Western Digital) aren't yet making them for the desktop market. You can find a few drives available now, but they're generally parallel ATA drives with an SATA interface bolted on, old drives masquerading as new. This makes them more expensive than the IDE equivalent, without offering any significant performance gains.

So should you ignore serial ATA? Not necessarily. If you have an SATA-enabled motherboard, adding two or more serial ATA drives would help you build a high-performing RAID array. But for the more budget-conscious, SATA may be an issue you can ignore for the time being.

CD affair

It may be the most popular backup device around today, but the humble CD writer is also lacking in major new developments, and the situation here is much more serious, with some people predicting the end of the road for CD-RWs. Could they be right?

There's no doubt that current drives are pushing the technology to its limits. To reach its 52x rating, a CD writer has to maintain a very high rotational speed, and there have already been horror stories about drives that shake themselves to bits. We're not sure about that, but it's certainly a problem to write accurately at these speeds, and the faster drives also tend to be much more noisy.

What's more, because drives only reach their maximum rated speed over a small part of the disc, moving from (for example) a 48x to 52x drive could make little noticeable difference to burn times. Probably the real killer blow, however, is that there's simply no money to be made in CD writers any more. While two years ago a leading-edge CD writer might sell for £200, you can now buy them online for nearer £40. We don't know how much profit the manufacturer makes from that, but it certainly isn't enough for research and development, and that's why top manufacturers such as Ricoh have moved out of the CD writer business.

Don't let that put you off buying one, though. CD-R and CD-RW discs are an ideal backup medium and they're going to be around for a very long time. Other manufacturers will continue to produce the drives, and we may even see further small improvements in speed – early 56x drives are already appearing.

"The real buzz at the moment is around the DVD writer market, which is finally taking off"

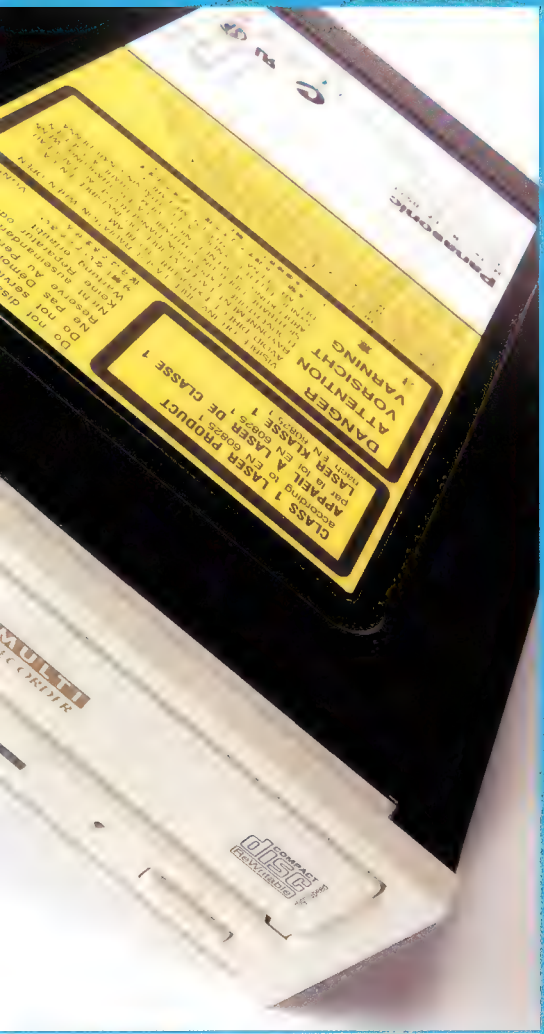
DV-ous

The real buzz at the moment is around the DVD writer market, which is finally beginning to take off. A 4.7Gb disc capacity is attractive, and the new 4x drives compete well with CD writer speeds. There's also an emerging consensus about formats. Most drives read and write DVD+R and DVD+RW discs, while the DVD-RAM format (a disc in a plastic caddy) looks destined to fade away. The end result is much more enthusiasm about the products, with Philips predicting sales of five million drives this year, rising to 50 million by 2006.

If you're thinking about moving from a CD to a DVD writer, make sure you look carefully at the media costs. DVD writers tend to be much more sensitive than their CD cousins about your choice of discs, and may not recognise cheap media (or even branded media from other manufacturers) at all.

There's also a case to be made for adopting a wait and see approach. First, the new 4x speed drives are available now, but there are plenty of 2x drives still around. Expect some good deals on end of line stock soon. Secondly, with Philips announcing an 8x speed DVD kit earlier this year, the 4x drives could have a very short shelf-life. No one wants to say when 8x products will arrive, but autumn looks like a good bet to us.

However, if you're the less patient type, don't worry because there are some great products available to buy right now. Check out online suppliers such as **www.dabs.com** and **www.pcnextday.co.uk** for competitive prices, and read on for our pick of the best internal drives.





Don't believe the hard drive hype

Checking the capacity is obvious, but what else matters when you're choosing a hard drive?

One headline number used to market hard drives is spindle speed, the rate at which the drive platters are rotating. This matters, but it's only likely to improve seek times and going from a 5,400 to 7,200rpm drive certainly won't give you a 30 per cent performance increase.

Drives with an ATA/133 interface also look better than the ATA/100 competition, but the truth is actually a little different. An ATA/133 connection just means the drive could transfer up to 133Mb/s, but in reality there are no desktop drives that require that much bandwidth.

Another commonly quoted figure is the internal buffer size (2 or 8Mb). This acts as a cache, and in this case there's no doubt that more is better. But how much better? This is very hard to say, which is why we run a variety of benchmark tests.



Hard drives: the next generation

A faster interface speed is just one of the benefits offered by serial ATA.

Even the first generation of SATA drives will feature an interface speed of 150Mb/s, which is far more than conventional ATA, but bus speed isn't really the key issue. First, because there's no more channel sharing, there are no jumpers to set – just plug the drive in and it works. Also, because each SATA drive is hot-swappable, you can remove and replace it later without even restarting your PC.

SATA cables are also very narrow and can be up to a metre long, so they'll route around your PC without the usual ribbon-cable clutter. The improved air flow could help keep your PC cool, prolonging its life. With other benefits such as reduced voltage requirements (useful when SATA reaches laptops) and much more intelligent communication with your PC, serial ATA looks like it's going to be a real step forward.

THE PCFormat SUPERTEST

- Hard drive reviews
- Budget drive reviews
- CD writer reviews
- DVD writer reviews
- Verdict and specs

HOW WE TESTED

Assessing hard drives, CD and DVD writers requires a series of careful tests.

PCF LAB

- **Our first test** involved timing how long it took to transfer a single large file, to measure sustained write speeds.
- **Real-life disk writes** are more complex than a single file, so we timed the copy of a folder tree. This contained 4,462 files in a total of 483 folders.
- **We used the SiSoft Sandra** File System benchmark to give each hard drive a rating, based on a detailed test of its read and write performance.
- **Next we timed how long** it took to burn 634Mb of data on to a CD and CD-RW drive. For DVDs, we wrote 4.34Gb of data to DVD+R and DVD+RW.
- **There's more to CD and DVD** drive performance than raw burn speed, so we used CD Tach and DVD Tach to produce an overall drive rating, and measured the sound produced in bels (a decibel is one tenth of a bel).

gold Format



HITACHI DESKSTAR 180GXP

£160 Hitachi

We've got used to associating IBM with the Deskstar brand of hard drive, but what was a joint venture between IBM and Hitachi has now moved on and the storage arms have merged into a single company, Hitachi Global Storage Technologies.

The Deskstar name and technology continues, though, and top of the current range is the Deskstar 180GXP. Three 60Gb platters deliver a nominal 180Gb of storage (172.6Gb once formatted) with a spindle speed of 7,200rpm helping to improve performance. Add an 8Mb memory cache and the 180GXP delivers in almost every department, only falling slightly behind some of the competition with its ATA/100 interface.

Of course, Hitachi adds a few technologies of its own to the mix. Some of them are difficult to quantify, such as the thermal monitor that "helps provide accurate data read/write over the full system temperature range". Good news? Probably, though as the operating range is already 5 to 55 C, few users are likely to notice.

Other benefits are more obvious, such as the FDB (fluid dynamic motor) that makes the 180GXP a quiet drive, even during the most disk-thrashing of our benchmarks. And what do those benchmarks show? Both the single file and complete folder tree copies return average times, but they're only testing write performance. Our SiSoft Sandra benchmark places the 180GXP in first place for its combined read and write performance, and our backup HD Tach results are similarly impressive. It seems that ATA/100 interface isn't such a problem after all.



→Detail

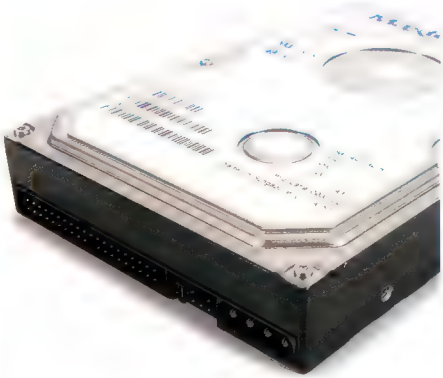
Formatted capacity 172.6Gb
Rotational speed 7200rpm
Cache buffer 8Mb
External transfer rate ATA 100
Motors FDB
Average seek 8.7ms
Average latency 4.2ms
Acoustics idle/seek (bels) 2.6.3.8
Web www.hgst.com
Phone 0870 429 3010

PCFormat Verdict

Good all-round performance, quiet, high capacity

"Deskstar products have a reputation for speed, and the 180GXP is a fast, high-capacity hard drive."

90%



MAXTOR DIAMOND MAX16 250GB

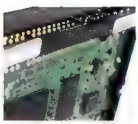
£350 Maxtor

Over 300 quid is an extremely high price to pay for any hard drive, but then 233Gb is a lot of storage. If you have a home network, for instance, it would make an ideal addition to a central server, providing lots of backup space for your other PCs.

It's interesting to see how the DiamondMax16's priorities differ from Hitachi's Deskstar. On this version of the drive, Maxtor has opted for a slower spindle speed (5,400rpm), reduced cache buffer (2Mb instead of 8Mb) and uses a ball-bearing motor.

The drive still seems quiet to us, perhaps thanks to Maxtor's Quiet Drive technology, but it is also available with an FDB motor. If you're thinking about buying a DiamondMax16, check the first few characters of the model number (ours reads 4A250J0). A letter 'J' after the drive capacity means it has a ball-bearing motor, while an 'L' refers to an FDB. 'B' and 'F' might have been a more obvious choice, but hey, what do we know?

Another technical plus point is the ATA/133 interface (assuming your system supports it). The drive also comes with the *MaxBlast* software, which is handy if you need help getting the drive installed, partitioned and set up on your system. But is this enough? Well, that depends on what you were expecting. The first file copy test produces a faster time than the Deskstar manages, but that's only testing a one-off sequential write. More complex tests such as copying our folder tree don't give such good results, and SiSoft Sandra rates this drive at around 70 per cent of the performance of the Hitachi's Deskstar, so don't expect to break any speed records.



→Detail

Formatted capacity 233.76Gb
Rotational speed 5,400rpm
Cache buffer 2Mb
External transfer rate ATA 133
Motors Ball bearing
Average seek 11.9ms
Average latency 5.6ms
Acoustics idle/seek (bels) 2.5/3.6
Web www.maxtor.com
Phone 01923 /12448

PCFormat Verdict

Very high storage capacity, ATA/133 interface

Below average performance, ridiculously expensive

"It's not fast, and a 250Gb capacity doesn't save it – two Deskstar 180GXPs would cost £30 less."

64%



SEAGATE BARRACUDA ATA V

£101 Seagate

The Barracuda ATA V was first released nearly a year ago, but the drive is still one of the best buys around, and the specification doesn't look dated either. There are plenty of drives around that can't compete with the Barracuda's 8Mb cache buffer, 120Gb capacity and 7,200rpm spindle speed.

Bundled along with the drive is a ribbon cable, four mounting screws, a quick setup guide and some unusually good installation software. There's also a plentiful selection of Seagate-patented extras. These include SeaShell (clamshell packaging to keep it safe in the box), SeaShield (a combination metal plate and foam insulator which covers the PCB and keeps the noise down), and *SeaTools* (some diagnostic software).

We tend to be sceptical of these features, which are often more about marketing than anything else. You do get a very real benefit from SoftSonic, though, Seagate's term for its fluid dynamic bearing motor. Seagate was the first company to add FDB motors to hard drives, and by now it really does know what it's doing. The Barracuda is rated as the "quietest hard drive in the world" for good reason – there's only marginally more noise when the drive heads are moving than when they're sitting idle.

Our benchmarks are unusually tricky to interpret. The drive is top of the list when copying the complete folder tree, perhaps as a result of its very low access time (an estimated 6ms). The single file copy, which relies more on a sustained write speed, is less impressive, and the SiSoft Sandra rating is only marginally above average. Not exceptional then, but a good mid-range performer.



→Detail

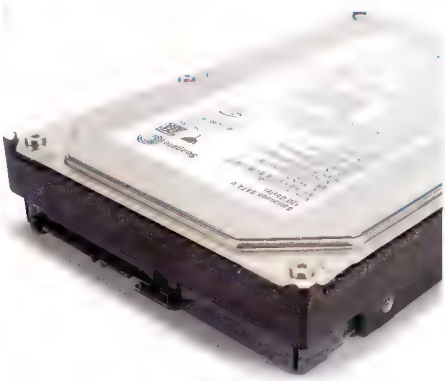
Formatted capacity 111.8Gb
Rotational speed 7,200rpm
Cache buffer 8Mb
External transfer rate ATA 100
Motors FDB
Average seek 9.4ms
Average latency 4.16ms
Acoustics idle/seek (bels) 2.5/2.8
Web www.seagate.com
Phone 0800 783 5177

PCFormat Verdict

- Very quiet, 8Mb buffer and a reasonable performance
- There are faster drives than the Barracuda ATA V available

"The Barracuda ATA V is good, but not quite [illegible] good deal online."

77%



SEAGATE BARRACUDA SATA V

£130 Seagate

We were hoping that perhaps half of the drives in this Supertest would be Serial ATA based. After all, it's the future and should soon be delivering faster drive speeds to everyone. Unfortunately, despite much pleading, most companies were unable to deliver any SATA drives at all. Sometimes this happens if marketing folks only have a couple of review products, and often we're told that samples will be arriving soon, but not in this case. It's likely that we won't be seeing too many Serial ATA drives until mid-summer, at the earliest.

Seagate is an honourable exception. Not only is the 120Gb Barracuda Serial ATA V available in review kit form, but you can also buy it yourself – just check your favourite online store. But is it really worth the effort?

Apart from its SATA interface, the drive specification is identical to the Barracuda ATA V, and that's not a bad thing, with its 120Gb capacity, 7,200rpm spindle speed and 8Mb buffer. The drive is also notably quiet and benefits from a generous three-year warranty.

Testing its performance was tricky because our primary test system isn't equipped with serial ATA. We added a HighPoint SATA PCI adaptor card, which in theory is a disadvantage to the Barracuda – it would be limited by the PCI bus, essentially to ATA133 speeds.

In practice, this wasn't an issue. The SATA Barracuda proves a little faster than its plain old ATA cousin, according to SiSoft Sandra, but it certainly isn't the best performer here. SATA still has its advantages, especially if you're setting up a RAID array, but for a one-off drive upgrade, you'd be better off elsewhere.



→Detail

Formatted capacity 111.8Gb
Rotational speed 7,200rpm
Cache buffer 8Mb
External transfer rate SATA/150
Motors FDB
Average seek 9.4ms
Average latency 4.16ms
Acoustics idle/seek (bels) 2.5/2.8
Web www.seagate.com
Phone 0800 783 5177

PCFormat Verdict

- Serial ATA interface, very quiet drive in operation
- Costs significantly more for only marginal speed gains

"[illegible] a serial ATA-based RAID array would be fast. If you're planning less, look elsewhere."

75%



WESTERN DIGITAL CAVIAR 80GB

£74 Western Digital

Because they must be of identical sizes, with the same connectors, most hard drives look identical. In general that's just fine because we're less interested in the case than what's inside it, but in this case (ha, ha), there are a couple of exceptions. First, on the base of every hard drive is a printed circuit board, under which lies the controller. Some companies go to great efforts to protect this, but on the Caviar 80Gb, Western Digital hasn't bothered. The board is exposed to the elements, risking damage during installation.

The jumpers may be another irritation to experienced PC users. Some manufacturers, such as Hitachi, print the relevant settings on the back of the drive, making it easy to change them if you rearrange your system later. Western Digital only prints them on top of the drive, so you may have to remove it to find out what they should be.

Elsewhere, the specifications show how the Caviar range is beginning to look its age. A 2Mb buffer and 5,400rpm spindle speed are nothing special, even for the budget area of the market. Despite these apparent limitations, the Caviar somehow manages to return above-average results in both of our file transfer tests. A 6ms estimated access time (remarkable for a 5,400rpm drive) isn't enough to save it, though, and the more thorough SiSoft Sandra and HD Tach tests place the drive firmly at the back of the field. It's likely to be replaced before long, so there's a chance you might find the Caviar 80Gb available at a bargain price, but if you don't, move on – there are better deals around.



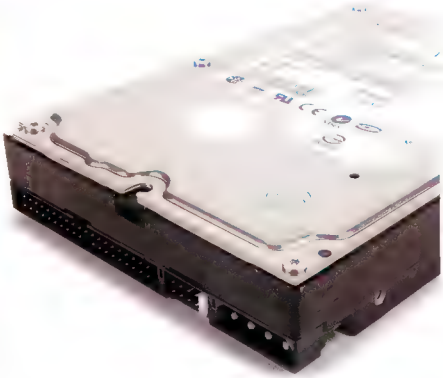
→Detail

Formatted capacity 74.5Gb
Rotational speed 5,400rpm
Cache buffer 2Mb
External transfer rate ATA 100
Motors Ball bearing
Average seek 8.9ms
Average latency 5.0ms
Acoustics idle/seek (bels) 3.2/3.6
Web www.wdc.com
Phone 01372 360055

PCFormat Verdict

- Reasonable price for 80Gb of storage, good access time
- Overall performance below average, minor design irritations

73%



WESTERN DIGITAL CAVIAR 120GB

£103 Western Digital

As a *PCFormat* reader, you're probably experienced in upgrading PCs, and know that installing a new hard drive is generally very simple. There are exceptions, though, especially in old systems where the BIOS doesn't support large drives such as the Caviar 120Gb. Western Digital doesn't leave you to cope alone though, and there's plenty of documentation and help provided in the box.

This starts with a Quick Install sheet that is detailed and helpful. Better still, the drive comes with Western Digital's *Data Lifeguard EZ-Install* tool, a DOS-based program to help you set things up. After formatting and partitioning the Caviar 120Gb, *EZ-Install* can even help copy data from an existing drive. There's a diagnostic check to make sure your BIOS supports drives larger than 32Gb, and a software patch to fix things if it doesn't.

The drive itself bears a strong resemblance to the Seagate Barracuda ATA V 120Gb capacity (111Gb after formatting) from its three 40Gb platters, 7,200rpm spindle speed and 8Mb buffer. It also comes with a three-year warranty, which is welcome.

The speed tests suggest the drives are well matched as the Caviar 120Gb wins out in our single files copy, but the Barracuda is faster when copying the folder tree. Our SiSoft Sandra and HD Tach workouts tip the balance in the Caviar's favour, with good random write and read speeds giving it around a 10 per cent performance lead. It's a marginal decision though, so we'd say shop around online for the best deal. If you can find the Barracuda ATA V significantly cheaper, it's worth considering.



→Detail

Formatted capacity 111Gb
Rotational speed 7,200rpm
Cache buffer 8Mb
External transfer rate ATA 100
Motors FDB
Average seek 8.9ms
Average latency 4.2ms
Acoustics idle/seek (bels) 3.0/3.1
Web www.wdc.com
Phone 01372 360055

PCFormat Verdict

- 120Gb capacity, decent price, good performance, helpful setup software
- The Caviar 120Gb isn't the fastest drive in every test

"It's not much faster than the competition, but it goes nothing wrong and is a worthy addition to your PC."

85%

Corbis



Speed limit

What are the speed benefits of upgrading to a 52x drive and is it worth it?

Every CD writer sells itself on its highest-rated CD-R speed, but moving from a 40x to 52x drive does not guarantee you a 30 per cent speed increase.

Why? Well, data is stored at the same density right across the area of a CD. This means that there's more data on the outside of a disc than the inside. Because most CD writers keep the disc rotating at a constant speed, its data transfer rate starts low, only reaching the top-rated 52x value towards the end of a burn.

Second, with burning a full CD of data now only taking a couple of minutes, overheads such as writing lead-in, lead-out and closing a disc are much more important. Unless your CD drive is very slow, perhaps 24x or less, upgrading may not boost your burn speeds too much.



A mass of media

With a range of different formats, be careful when you purchase blank DVD discs...

One reason DVD writers haven't been popular is the confusion over which recordable format will succeed. So what are the options available?

The oldest form is DVD-RAM, a disc encased in a large plastic cartridge (something similar to a big floppy disc). The maximum capacity of 9.4Gb is useful, but its incompatibility with standard DVD players is not. DVD-RW is a more conventional 4.7Gb disc, developed by Pioneer. Unfortunately it's not great at supporting video recording, so HP, Sony, Philips and others devised an improved DVD+RW format.

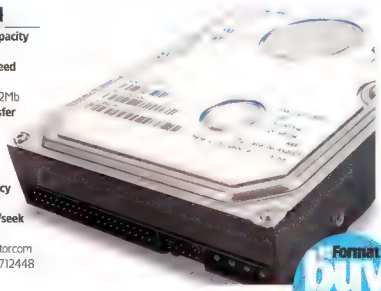
Most drives read DVD+R, DVD-R, DVD+RW and DVD-RW discs, but only write either the '+' or '-' format. Our choice (and that of most others) would be DVD+RW because it's technically superior, but you could also opt for a drive that reads and writes all formats.

TRICKS & TIPS

Most IDE drives are packaged with ribbon cables that take up an inordinate amount of room inside the case. Rounded IDE cables are a cheap way of keeping things tidy, and improving cold airflow.

→Detail

Formatted capacity 57.27Gb
Rotational speed 7,200rpm
Cache buffer 2Mb
External transfer rate ATA/133
Motors FDB
Average seek 9.4ms
Average latency 4.2ms
Acoustics idle/seek (bels) 2.7/3.5
Web www.maxtor.com
Phone 01923 712448



Format buy it! 2003

DIAMONDMAX PLUS9

£68 Maxtor

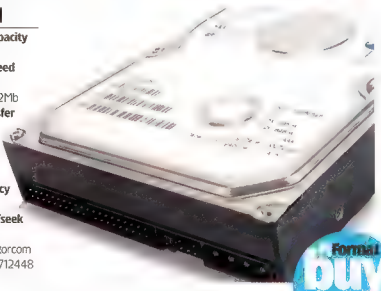
Theoretically, it would be great to have a 250Gb hard drive (better still to have two), but in practice that amount of storage could cost you the same as a cheap PC. Most people concentrate on what they need, rather than what they want, and a 60Gb drive is often enough.

The DiamondMax Plus9 proves you don't have to sacrifice technical goodies in a budget drive, because it manages to include a 7,200rpm spindle speed, FDB motors and an ATA/133 interface. Its 2Mb buffer might seem to be a problem but, surprisingly, the DiamondMax Plus9 does well in every speed test in our trials and is probably the second fastest drive here, so 'budget' really doesn't have to mean 'slow'.



→Detail

Formatted capacity 76.33Gb
Rotational speed 5,400rpm
Cache buffer 2Mb
External transfer rate ATA/133
Motors FDB
Average seek 12.6ms
Average latency 5.6ms
Acoustics idle/seek (bels) 2.5/3.6
Web www.maxtor.com
Phone 01923 712448



Format buy it! 2003

DIAMONDMAX16

£75 Maxtor

Our second value drive is also a Maxtor, but it comes from a different family. The DiamondMax16 drives have an ATA/133 interface and FDB motor, but the spindle speed drops to 5,400rpm, and performance tails off accordingly.

Our tests show that this drive can't compete with the DiamondMax Plus9. Write performance is similar, but the DiamondMax16 is slower at reading and has a SiSoft Sandra rating around 12 per cent lower. So why is it a value drive? Because for a little extra cash, you can get around 20Gb extra, making it a wise choice for those who value capacity ahead of performance. In two years' time, when you sell your PC, that extra 20Gb could make it much more attractive.



→Asus CRW-5224A

CD speeds 52x CD-R, 24x CD-RW, 52x CD-ROM
Access time 100ms
Buffer memory 2Mb
Buffer underrun technology FlextraLink
Front panel controls Eject button, next track button, writing LED, reading LED, volume control, headphone socket
Media provided 1x CD-R, 1x CD-RW
Warranty Two years
Web www.asus.com.tw
Phone 0870 429 3010 (Dabs)



→NEC NR-9300

CD speeds 48x CD-R, 24x CD-RW, 48x CD-ROM
Access time 100ms
Buffer memory 2Mb
Buffer underrun technology JustLink
Front panel controls Eject button, activity LED, volume control, headphone socket
Media provided 1x CD-R, 1x CD-RW
Warranty Two years
Web www.nec.co.uk
Phone 0208 752 3665



→BenQ CRW-5224P

CD speeds 52x CD-R, 24x CD-RW, 52x CD-ROM
Access time 100ms
Buffer memory 2Mb
Buffer underrun technology Seamless Link
Front panel controls Eject button, next track button, activity LED, volume control, headphone socket
Media provided 1x CD-R, 1x CD-RW
Warranty Two years
Web www.benq.co.uk
Phone 01442 301000



→Sony CRX220A1

CD speeds 52x CD-R, 24x CD-RW, 52x CD-ROM
Access time 100ms
Buffer memory 2Mb
Buffer underrun technology Power-Burn
Front panel controls Eject button, activity LED, volume control, headphone socket
Media provided None
Warranty One-year
Web www.sonyisstorage.com
Phone 0207 365 7871



ASUS CRW-5224A
£43.48 Asus

Cheap though it is, Asus manages to bundle a few hardware extras with its CRW-5224A: mounting screws, cables (IDE and CD audio) and a sample CD-R and CD-RW disc. Software is more limited, with *Nero Express* rather than *Nero Burning ROM*, but it's easy to use.

Good variations from the CD writer norm include two activity LEDs (one flashes when writing, the other when reading). One bad variation is a less-than-pressure-sensitive drive tray – you really have to push before it closes. The documentation is weak too.

Performance is where the Asus wins out: it scores first place for our CD-RW write time and CD Tach rating, and comes in second for CD-Rs. All this for under £45? Sounds like a bargain to us.

PCFormat Verdict
Good CD-RW performance, very cheap
one – a bargain
90%

BENQ CRW5224P
£47 BenQ

With the CRW5224P, BenQ (an arm of electronics giant Acer) is competing head to head with Asus: same 52x specifications, same hardware bundle, even the same *Nero Express* mastering software. It does provide more documentation, but unfortunately it's almost entirely rubbish.

Our benchmark results are mixed. CD-R performance is fine, with the 52x write mode producing our test CD in a mere two minutes and seven seconds DAE (digital audio extraction) runs at the same speed, a fraction faster than the Asus. CD-RW speeds are disappointing. Although this can write at the same 24x rate, the Asus proves to be more than a minute faster. Even trying different discs, the results don't change significantly.

PCFormat Verdict
documentation
74%

NEC NR-9300
£69 NEC

NEC's NR-9300 may only be a 48x drive, but it does benefit from some of NEC's own technologies. In particular, there's the active optimum power control which helps your drive automatically adjust to whatever media you happen to buy. It seems to work too, and the NR-9300 correctly burned all our discs, even some very nasty, cheap, old ones.

The NR-9300's performance lags a little behind the competition, with both the CD-R (3.10) and CD-RW (5.01) write times. Its CD Tach drive rating is better at 30.8x, but this also shows a curiously high CPU utilisation figure of 63 per cent, roughly double the figure we were expecting. A high price doesn't help, although you may be able to earn this back by using cheaper media.

PCFormat Verdict
below-par performance, high CPU use
"Quite expensive, but worth a look as it works with cheap media."
70%

SONY CRX220A1
£57.99 Sony

Check the Sony CRX220A1's box and you find a relatively feeble hardware bundle, with no CD audio cable or blank media. The documentation is poorly thought out and spread across several multilingual sheets too. The mastering software is B's *Recorder GOLD5*, which misbehaves occasionally – for example, it insists on creating an image file on our system, whether we ask for one or not.

Add a one-year warranty (its three competitors each offer two) and reasons to buy the CRX220A1 are scarce. The benchmark tests don't change our minds. Our 52x CD-R test disc is around 30 seconds slower than the BenQ CRW5224P, and the CD-RW and CD Tach tests are little better. The only plus point is that the CRX220A1 is very quiet.

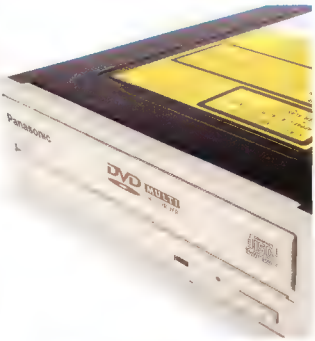
PCFormat Verdict
Sony's CRX220A1 is very quiet
short warranty, outperformed, quirky software
"Doesn't have what it takes to compete in this crowded market."
66%

→Asus DRW-0402P



Writes 4.7Gb DVD-R, 4.7Gb DVD -RW, CD-R, CD-RW
DVD speeds 4x DVD-R, 2x DVD-RW, 12x DVD read
CD speeds 16x CD-R, 8x CD-RW, 32x CD-ROM
Buffer memory 2Mb
Buffer underrun technology Included
Front panel controls Eject button, activity LED, volume control, headphone socket
Media provided 1x DVD+R, 1x CD-R
Web www.asus.com.tw
Phone 0870 429 3010 (Dabs)

→Panasonic LF-D521E



Writes 2.6Gb, 4.7Gb DVD RAM, 4.7Gb DVD+R 4.7Gb DVD+RW, CD-R, CD-RW
DVD speeds 2x DVD+R 1x DVD+RW, 2x DVD-RAM
CD speeds 12x CD-R, 8x CD-RW, 32x CD-ROM
Buffer memory 2Mb
Buffer underrun technology Seamless Link
Front panel controls Eject button, activity LED
Media provided 1x DVD+R, 1x DVD-RAM
Web www.panasonic-industrial.com/datastorage
Phone 0845 600 3535

→NEC MultiSpin 4X DVD+ Writer



Writes 4.7Gb DVD+R, 4.7Gb DVD+RW CD-R, CD-RW
DVD speeds 4x DVD+R, 2.4x DVD+RW 12x DVD read
CD speeds 16x CD-R, 10x CD-RW, 40x CD-ROM
Buffer memory 2Mb
Buffer underrun technology JustLink
Front panel controls Eject button, activity LED, volume control, headphone socket
Media provided 1x DVD+R, 1x DVD+RW
Web www.nec.co.uk
Phone 020 8752 3665

→Philips DVDRW228



Writes 4.7Gb DVD+R, 4.7Gb DVD+RW, CD-R, CD-RW
DVD speeds 2.4x DVD-R, 2.4x DVD-RW
CD speeds 12x CD-R, 10x CD-RW 32x CD-ROM
Buffer memory 2Mb
Buffer underrun technology Seamless Link
Front panel controls Eject button, CD & DVD activity LEDs, volume control headphone socket
Media provided 1x DVD+R 1x DVD+RW
Web www.ce.philips.com
Phone 020 7949 0069

ASUS DRW-0402P
£205.63 Asus

The Asus DRW-0402P first stands out for its lack of a DVD-RW disc – you get a DVD-R and CD-R only. The software includes *Nero Express*, the excellent *CyberLink PowerDirector DE* and *MediaShow SE*, bundled with the movie viewer *ASUSDVD*

In performance terms the drive is good, writing DVD-R discs at 4x, and DVD-RW at 2x. CD speeds are creditable at 16x 8x 32x, although they can't compete with a dedicated 52x CD writer

The DRW-0402P does well in our benchmark tests, writing our DVD-R disc in a little over 15 minutes. Our generic DVD-Rs are recognised as 1x speed discs, but the DRW-0402P can't handle branded HP and Panasonic 4x media at all – *Nero Express* says the drive is empty

PCFormat Verdict

Good software, performs well, full install kit

Some 4x DVD-R discs not recognised

"If you don't want to use cheap media, this is a good deal."

82%

NEC MULTISPIN 4X DVD+ WRITER
£249 NEC

The MultiSpin 4X DVD+ Writer features a great software bundle with *Nero Express* for easy mastering, *Nero Burning ROM* for the power options, *Nero VisionExpress* for video authoring, plus *Nero InCD* and *MediaPlayers*. The much-bundled *MyDVD* and *ArcSoft ShowBiz* cover video editing and creation, while *Sonic CinePlayer* can play DVD movies

Benchmarks are good, with a 14-minutes 4x DVD-R and equally good DVD-RW time putting the ND-1100A ahead of the competition. This drive also proves very good at handling other media. It accepts an HP-branded disc as 4x speed and successfully writes our generic DVD-R discs at 2.4x speed. An excellent all-rounder, the ND-1100A sets a standard that will be very hard to beat

PCFormat Verdict

Wide media compatibility, performs well

Minimal documentation included

"Fast, recognises all our media and has lots of decent software."

90%

PANASONIC LF-D521E
£199.95 Panasonic

Confused by all the different DVD formats? Then you may be attracted to the Panasonic LF-D521E which reads and writes DVD-RAM discs along with the more usual DVD+R and DVD+RW types. It supports CD-R and CD-RW too

There's a performance price to pay though, and the drive writes DVD+R and DVD+RW discs at half the speed of the competition. The LF-D521E seems very sensitive to our media choice too, failing to recognise some generic DVD+RW discs. We knew from its official speed ratings that the LF-D521E wouldn't do well in our performance tests, so its last place is no surprise. Add the noise (it's actually louder than our test PC) and this drive is only really worth a look if DVD-RAM compatibility is vital

PCFormat Verdict

Writes DVD-RAM, lots of software

Noisy, writing problems, poor performance

"Can write DVD-RAM discs, but has lethargic write speeds."

73%

PHILIPS DVDRW228
£199 Philips

After running through the Philips DVDRW228's excellent and well documented setup routine, you get to install the main software bundle, a selection that includes *Nero Burning ROM*, *InCD*, *MyDVD* and *PowerDVD* These are installed silently – no searching for serial codes, choosing installation options and so on. Drive innovations include an LED strip that glows red if you're writing a CD or blue if it's a DVD – not exactly necessary, but it looks good

The 2.4x write speed helps the DVDRW228 burn 4.5Gb of data on a DVD+RW disc in just over 24 minutes, outperforming the LF-D521E (though quite noisily) With a two-year warranty and the drive's new £199 price tag, there's lots to like about the DVDRW228

PCFormat Verdict

Easy install, OK performer, good software

No 4x DVD-R, we're suppose, a little noisy

"It lags behind the latest 4x DVD writers but is still a good buy."

79%

PCFVerdict

We've put our drives through a testing triathlon of benchmarks, so who came out on top?

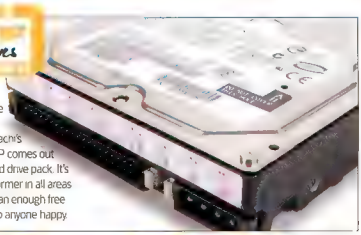
Write speed, read speed, access and seek times – there are many factors that contribute to a top-performing drive. Each of our benchmarks tests a different combination of these elements, so we expect the results to vary significantly. And we're not disappointed.

In many cases, drives do well in one test and then fail in another. Although this can make the results difficult to interpret, it's actually a good sign, confirming that each benchmark is testing a separate aspect of the drive.

Performance is by far the most important criteria we've marked on, but it's not the only thing to take into consideration when buying a drive. We've also scored the kit for providing some good documentation and a reasonable bundle. Our DVD writers need to come with a selection of blank discs, which can still be expensive and (hopefully) some high-quality bundled software – we favour quality over quantity.

As with any upgrade, it's important to work out what you're going to use it for before hand. If you're video editing, for example, space will be the biggest consideration. For playing games, speed is all important. Finally, shop around – the prices we quote can often be beaten online. **PCF**

NEXT MONTH
WIRELESS NETWORKING



PC Format
BEST OF THE BEST
Hard drives

It's a tough call and performance differences are marginal, but Hitachi's Deskstar 180GXP comes out on top of the hard drive pack. It's quiet, a top performer in all areas and has more than enough free gigabytes to keep anyone happy.



PC Format
BEST OF THE BEST
CD writers

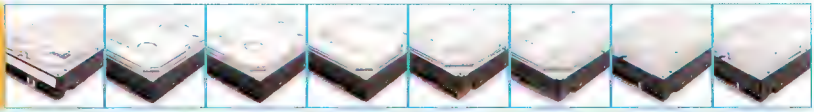
When top CD writers cost a couple of hundred quid, there was an excuse not to have one. Now super-fast drives such as the Asus CRW-5224A are available for under £50, everyone can afford leading-edge technology. So go buy it!



PC Format
BEST OF THE BEST
DVD writers

A great performance, lots of software and the ability to work with just about any media put NEC's MultiSpin 4X DVD+ Writer at the top of our DVD list. And don't be put off by the £249 price tag – it's available for much less online.

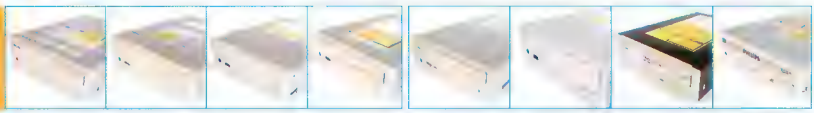
INTERNAL HARD DRIVES



	HITACHI DESKSTAR 180GXP	MAXTOR DIAMOND MAX16 80GB	MAXTOR DIAMOND MAX16 250GB	MAXTOR DIAMOND MAX PLUS9	SEAGATE BARRACUDA ATA V	SEAGATE BARRACUDA SATA V	WESTERN DIGITAL CAVIAR 80GB	WESTERN DIGITAL CAVIAR 120GB
SINGLE FILE COPY	45 seconds	43 seconds	40 seconds	42 seconds	44 seconds	39 seconds	57 seconds	56 seconds
FOLDERS COPY	88 seconds	98 seconds	98 seconds	92 seconds	79 seconds	89 seconds	85 seconds	86 seconds
SISOFT SANDRA	35,882Kb/s	28,624Kb/s	26,387Kb/s	32,848Kb/s	28,726Kb/s	29,627Kb/s	26,622Kb/s	31,688Kb/s
FORMATTED CAPACITY	172.6Gb	76.33Gb	233.76Gb	57.27Gb	111.8Gb	111.8Gb	74.5Gb	111Gb
ROTATIONAL SPEED	7,200rpm	7,200rpm	7,200rpm	7,200rpm	7,200rpm	7,200rpm	7,200rpm	7,200rpm
CACHE BUFFER	8Mb	2Mb	2Mb	2Mb	8Mb	8Mb	2Mb	8Mb
EXTERNAL TRANSFER	100Mb/s	100Mb/s	100Mb/s	100Mb/s	150Mb/s	150Mb/s	100Mb/s	100Mb/s
AVERAGE SEEK	8.7ms	12.6ms	9.4ms	9.4ms	9.4ms	9.4ms	8.9ms	8.9ms
AVERAGE LATENCY	4.2ms	4.2ms	4.2ms	4.2ms	4.2ms	4.2ms	4.2ms	4.2ms
PRICE	£160	£75	£350	£68	£101	£130	£74	£103

PCFormat

CD/DVD WRITERS



	ASUS CRW-5224A	BENQ CRW5224P	NEC NR-9300	SONY CRX220A1	ASUS DRW-0402P	NEC MULTISPIN 4X DVD+ WRITER	PANASONIC LF-D521E	PHILIPS DVDRW228
SINGLE FILE COPY	176 seconds	180 seconds	190 seconds	187 seconds	822 seconds	845 seconds	1,407 seconds	1,441 seconds
WRITE TIME	229 seconds	292 seconds	301 seconds	290 seconds	1,659 seconds	1,428 seconds	2,910 seconds	1,436 seconds
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PCF Hardcore

Case mods/DIY gaming/Hardware hacks **Ban the beige!**



GEOFF HARRIS ACTING EDITOR

A CASE IN POINT

When the idea of PCF Hardcore was mooted, some cautious souls fretted that we'd struggle to find top-flight case mods for every issue. How wrong they were. An avalanche of emails proves that case modding is no passing craze – even traditionally conservative suppliers such as Time are experimenting with more adventurous designs, so beige case makers must be getting a little worried. It's still very much a DIY scene, though, and the standard of modded cases we see is gratifyingly high. Even the people who botch it are at least having a go at being creative. So keep on sending in photos of your mods, and please don't worry that they're not 'good' enough. This issue's Hardcore also takes a look at the incredible Mini-ITX modding scene, where less really is more. And for extreme gamers, we have exclusive *Counter-Strike* tips from pro gamers Doug and Ewan Wright. They're lovely guys, though they'll kill you if you meet them. On the opposite team, of course

geoff.harris@futurenet.co.uk

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GET STUCK IN!

You wouldn't want to be a clone of anyone, so why is your PC the same as everyone else's? Get modding now!



MOD OF THE MONTH

CASE MODDING
Nick House spent an unbelievable three grand on his PC, improving it both inside and outside. If you think your modded PC would impress us here at *PCFormat*, contact us at pcfmail@futurenet.co.uk – don't forget to include a photo of the PC.



150

PLAY LIKE A PRO

Battlin' brothers Doug and Ewan Wright reveal how the professionals play *Counter-Strike* in the first part of our new series.



156

MINI-ITX MODDED CASES

Everyone knows that small is beautiful. But judging by some of the cases on show here, it can also be pretty weird-looking, too.

Plus

151 4KING BRILLIANT
Pro-gamer Doug Wright reveals what he's been playing this month.

152 NEVERWINTER
You've mastered the toolset, now you need a story for your mod.

158 HARDWARE
Overclock your processor for the ultimate speed rush.

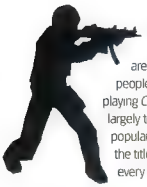
160 CUSTOMISATION
Make your PC stand out with a whole new theme for Windows.

162 HACK WINDOWS
Boost your PC's performance.

COUNTER-STRIKE

PLAY LIKE A PRO

Professional gamers, **Doug** and **Ewan Wright** from the 4Kings clan, call a temporary truce while they share some of the secrets of winning at *Counter-Strike*.



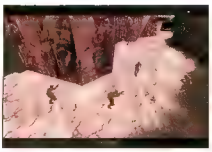
As you are reading this, there are close to 100,000 people online right now playing *Counter-Strike*. Due largely to its overwhelming popularity, it has become the title game at practically every pro-gaming event in the western world. So if you want to be the next Emil 'HeatoN' Christensen or just want to spank your friends that little bit harder, you should be able to find enlightenment here.

We've given you a selection of tricks and advice on general technique as well as walkthroughs detailing team attacks to be used as examples of strategy. We are detailing three attacks for use in team games. These are strategies for the terrorist (T) side on de_nuke. You can presume the counter-terrorist team (CT) on nuke will do one of three strategies: a) having one defend outside, two in bomb point one (bp1) and two covering the ramp, b) having three in bp1 and two ramp; or c) having one ramp, two bp1 and one outside. Each attack can be used as a counter to the CT's defence and should be used to inspire ideas for your own.

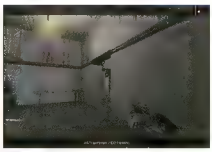
Due to the complex nature of *Counter-Strike*, it's only possible to scratch the very surface in a tutorial like this, which is why 4Kings is currently toying with the idea of offering a coaching service to any who would like it. Mail Doug at **wright@four-kings.com** for more information. **PCF**

>>THE RAMP RUSH

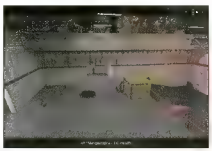
A full-speed attack on a hard area to defend.



01 All full rushes benefit from having the front spawns, and this is no exception. On de_nuke, the two front are just at the top of the small hill in the T spawn.



02 The first flash should be thrown by the person at the front, from the radio room, off the box and down the ramp. The second one can be from the person behind.



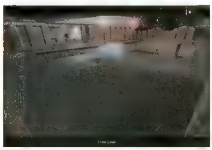
03 Sort out where you'd want everyone to go and stick to it as much as possible. Given there are bound to be one or two deaths on the way, nothing is ever perfect.



04 A rally point is a good idea when moving into a defended area. A couple of seconds to regroup before charging together. Keep the momentum in situations such as this.



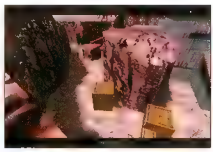
05 Be aware of spots where you are likely to find an enemy. Here you should be aware of both vents, behind the box, on the ramp in front or lurking in the corners.



06 Always pick your moment to plant the bomb – in a lot of situations, CTs rush in to try to catch you doing it. It can be worth knowing you're secure.

>>BOMB POINT ONE RUSH

A direct assault on the main bomb point.



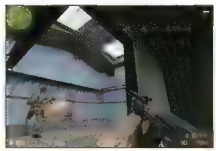
01 This rush is to be used against teams with two defending the ramp and one outside. Five people move quickly into bp1 from several entry points at once.



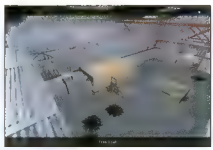
02 Flash bangs are the key and it's worth delaying a couple of seconds if it will help. Here the last person in uses two flashes to open and flash through the door.



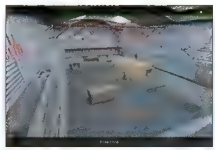
03 Here the first person into the hut runs to the window and flashes up against the wall; bouncing the flash bang off the wall, forcing the CTs to look away.



04 Here we see the two Ts free to look and then move out of the hut door due to the previous player's flash. It's often worth flashing on to the rafters to blind a CT staying back.



05 The culmination, with two going out the door, one slips out the window, one follows his flash through the door and one attacks from the outside bp1 entrance.



06 Covering positions are quickly taken up after the bomb is planted. If only two or three of you survive, hide in corners rather than trying to face every entrance.

GUNS FOR HIRE

Wily ways to use your weapons.



Remember it's worth doing economy rounds to save up for the better weapons – these are mainly the rifles M4, AK, AUG, SIG, AWP and MP5, if you're really desperate. As for pistols, the USP is really the best for all-round use. Desert Eagles and Glocks can be made use of in clever ways. Almost all guns should be fired between movements and are more accurate when crouching. The length of burst from one bullet to full auto is proportionate to the distance of your enemy, and pulling the cross hair down to his feet accounts for the recoil. Tapping crouch can be used to see over boxes instead of jumping. Ladders can be climbed silently if done slowly enough by aiming your cross hair slightly below the horizontal centre of your screen while holding forward.

TRICKS & TIPS

>>CAMPING

WALLS In *Counter-Strike*, when a wall separates two players, whoever is closest to that wall will eventually be seen first when either player strafes round. This should be taken into consideration when choosing any camping spot where someone may come round the corner you are watching. Make sure you are further away from it than they are.



4King brilliant!

Pro gamer **Doug Wright** looks forward to playing his way to $70,000

Love us or hate us, this month because 4Kings has officially been moved up from the waiting list to the participants list for the CPL Dallas World Championships in July (**www.thecpl.com**). Sponsored by Intel and nVIDIA, the event has a prize pool of $250,000 just for *Counter-Strike*, with the [illegible] prize ever for a [illegible] person shooter – a prize of $70,000 up for grabs. Considering we've been leaping higher and higher up the leaderboard at each event, we should [illegible] this time, right? I can't wait to see. Another good thing coming up around [illegible]

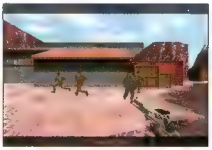
"[illegible]15: the largest UK LAN event – but that's more fun at Uprising"

[illegible] couple of weeks [illegible] Arena (**clikarena.com**) in Toulouse, France. With a prize pot of 150,000 euros, it promises to bring in the best gaming teams from around the globe and no doubt there will be [illegible] report in my next column.

As for LANs this month, [illegible] to a small, 80-person event in Scotland (**www.uprisinglan.co.uk**). Then the week after I was off to the largest LAN event ever in the UK, with just over 1,000 participants: i15. As you may or may not have gathered, i15 was the fifteenth in a series of events run every two or three months by a company called Multiplay (**www.multiplay.co.uk**). It's a fun-orientated event rather than a serious competition, nonetheless there are tournaments for various games with moderate cash prizes that don't normally cover the pretty sort entry cost of £345 for three days' gaming for five people. That's £60 entry per person for the less mathematically inclined. That said, the Newbury Racecourse venue is second to none in the UK, and if you've got the means to get there with your PC under your arm, it's well worth going. Personally, I had more [illegible] planned.

>>BOMB POINT ONE SPLIT

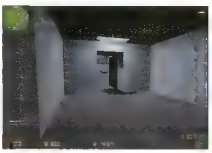
A slower split attack on the main bomb point.



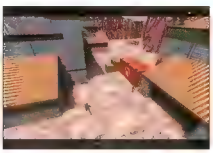
01 This can be used when there's no one defending outside or to pick off their man outside with your three. The two inside hold position until everyone's ready to go.



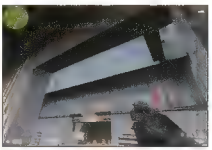
02 The three outside move into position. It's always best to remain unseen as far as possible. Being in unexpected places is a big part of the attacking role in *CS*.



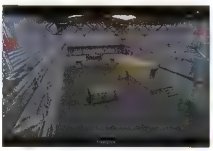
03 Set a time for attack. Here a time would be set for the person at the door to flash out, then the hut window flash, then the outside and inside players attacking.



04 If a team has no defence outside, send one of your outside players to the CT ladder because the CT at the top is forced to fight the people moving into bp1.



05 The same flash from the bp1 rush paves the way for the entry here. The picture shows how the flash blinds the defending team while not affecting the attackers.



06 There's much more you need to be aware of than it is possible to detail. There are many more strategies and what we've given you is best used for inspiration.



Black is definitely back in *Counter-Strike* fashion.

CLOSING IN

How to get the best results from our favourite weapon.

The AWP is arguably the most effective weapon in *CS*. With its $4,750 price tag, it's often the scourge of public servers, provoking endless abuse and is very much a personal favourite. The trick to effective play is keeping time spent zoomed down to a minimum for reasons of manoeuvrability, not to mention a wider scope of vision. One nifty way of doing this is pressing the fire button before you see the zoomed scope but after you have pressed the zoom button. Holding your zoom and fire buttons slightly before the AWP is ready to fire results in an accurate shot fired as soon as it is ready to do so.



GAMES MODS

NEVERENDING NEVERWINTER



Wolf-boy could be your best mate. It's all about his factions.

PART THREE

The plot thickens as **Tim McDonald** conjures a ripping yarn to get us on the edge of our seats.

TRICKS

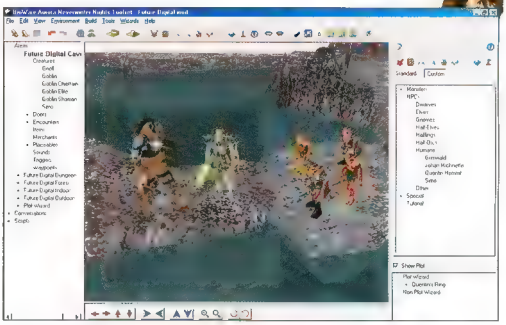
>>QUALITY CONTROL

TESTING, TESTING As you add to your mod, you need to test it to make sure the things you are doing in the toolset are working properly in the game itself. If you are testing one particular area of your mod, place the starting point in the toolset near the location where you will be testing. When you play your mod, you appear where you have placed your starting point. The starting point is shown as a blue circle with a red arrow inside

The *Neverwinter Nights* toolset enables you to physically create an adventure by making maps, placing creatures and writing conversations. With a little diligence, most people can do this part of mod making, but what about creating the story and quests that will be in your adventure? How does one go about coming up with ideas and creating quests that the player will enjoy?

Once you have a working knowledge of the toolset by practising with it and trying the various tutorials that are available, you are ready to get down to the task of making your adventure. Being organised and prepared beforehand translates into a smoother ride when you begin making your vision a reality.

Writing an outline for your mod is a good start. It can be as simple as having an idea for a beginning, middle and end for your mod, or it can be much more complex. Like other creative processes, such as composing songs or writing literature, you never know when you will be hit with that great idea or get inspiration. Keep a pencil and paper with you whenever you can and jot down ideas so that you can go back to them at a later date. You can keep these ideas together in a binder, folder or in a database for future reference.



Are the goblins and the gnoll friend or foe? Only the mod maker knows for sure.



A blue and green dragon in the midst of a pitched battle. They must have been from opposing factions.

Quest-tion time

Try to establish plausible reasons why things are as they are in your mod. What is the motivation of the villain? Why should the player have a real interest in taking on the main quest and various side quests that you present to them? As you design your mod, continue to ask yourself these types of questions because they're exactly what your player will be asking too. As the mod maker, you know how the story is going to turn out and why, but the player is completely in the dark, so give them good reasons to take on your quests. The *Neverwinter* toolset has a useful feature called the Plot Wizard (added in one of the early Bioware updates) that helps you to create simple quests quickly and easily. It essentially gets you to fill in the blanks in a series of steps to create a small quest or plot within your mod. You can use existing preset plot blueprints or make your own. You still need to come up with an interesting idea for your quest yourself, but the Plot Wizard makes it easy to put into place.

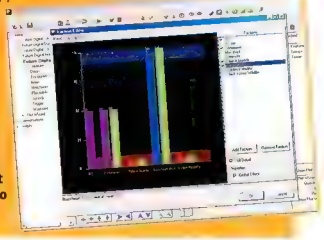
There are a number of ways to keep the player interested and enhance their enjoyment of your mod. One of them is by the use of plot twists. Like a good mystery movie, leading your players to believe one thing and then having an unexpected outcome can greatly enhance the player's enjoyment. Perhaps the person you have painted as a villain at the beginning

USING FACTIONS

Why can't we all just get along with each other?

The Faction Editor (accessed from the Tools pull-down menu) can be used to define how groups of non-player characters (NPCs) relate to other groups of NPCs and to the player. Obviously, a group of paladins would generally not be friendly to a group of orcs. The paladins and orcs might be friendly, neutral or hostile to the player, depending on the player's alignment and other factors. As the player progresses in your mod, these reactions may change.

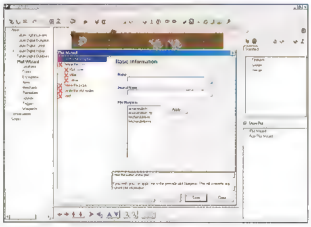
Using custom factions is a very good way for the mod maker to let the player have a real effect on the mod (and thus the little world) in which they enter. The player wants his actions to have consequences, good or bad, and have the feeling he can change the world he/she is in. The initial reputation values (listed as a number from 0 to 100) can easily be adjusted by moving mouse-driven sliders up or down. If the values are high, there is a favourable reaction between factions. Conversely, if the values are very low then animosity is present between the factions. If the values are too low, one faction attacks the other on sight.



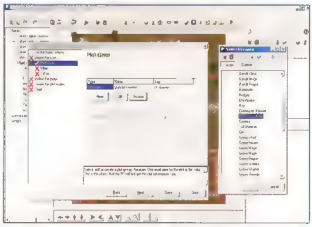
The Faction Editor enables you to create custom factions and then determine how these factions react to each other and to the player.

>>USING THE PLOT WIZARD

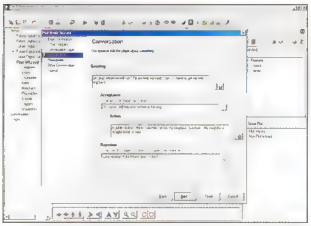
Now there's a novel idea...



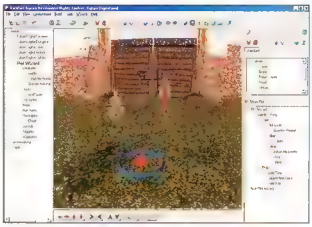
01 WIZARDS Open the Plot Wizard by clicking on Wizards and then Plot Wizard. From here you can use an existing plot blueprint or create your own plot.



02 PLOTTING Creating the Plot Giver in the Plot Wizard. The Plot Wizard enables you to follow a series of easy-to-follow steps to shape your plot.



03 TALKING The Plot Wizard guides you through the process of creating conversations for the creatures in your plot by providing a series of conversation boxes.



04 TESTING Our plot nodes and conversations have been completed and we have placed our plot characters. Time to load up the game and try it out.

of the game has motives that the player might be sympathetic to once uncovered? Maybe a kindly character who has been helping the player is really the villain of the piece? Tossing in a few plot twists, whether they are of a minor or major nature, helps to keep your mod interesting to the player.

Proper factions

One important aspect of a mod is how the player relates to the non-player characters and how the non-player characters relate to each other. For instance, you might have a set of caves where goblins and kobolds reside. Do the goblins get along with the kobolds or are they at war, and how do these creatures react to the player?

The toolset enables you to establish how creatures react through the use of the Faction Editor. As events unfold in your mod, the actions the player takes and the choices they make affect how they are viewed by other characters. Players like to have choices and like to know that their choices have an impact on what happens in a game.

In next month's article on *Neverwinter Nights*, we'll talk about scripting and custom content. Create by thought and create by action, and have fun doing both. **PCF**









PLACES TO VISIT

HTTP://NWN.BIOWARE.COM/FORUMS/
An excellent on-going source of information from a helpful community

HTTP://NWN.BIOWARE.COM/BUILDERS/PLOTWIZARD_INTRO.HTML
The basics of the Plot Wizard laid bare, along with an interview with Don Moar, Bioware's lead programmer of tools.

HTTP://NWN.BIOWARE.COM/BUILDERS/PLOTWIZARD_TUTORIAL.HTML
In the unlikely event that our tutorial isn't enough for you, take a look at Bioware's own handy guide.

WWW.VERSUSBOOKS.COM
A book which is good source of information on mod building, laid out in an easy-to-follow manner.



Man about the house

Another month indoors with our MMORPG expert **Andy McGregor**

Sci-fi massively multiplayer online role-playing games, championed by many as 'Elite online', *Eve: The Second Genesis* (reviewed in this issue on page 85, www.eve-online.com) hit the shelves on May. And what a wait it was. From the out CCP's space trading game, developer CCP has brought the dreams of many an online gamer to life. While there's no connection between the David Braben game and *Eve*, the inspiration is constantly visible. With *Planetside* creeping closer to retail, Sony has dished out around 60,000 beta keys with the latest round of testing, showing the scale in which gamers are ready to invest in the hybrid FPS/RPG genre.

With multiplayer online gaming seemingly becoming the norm with the increase in high-speed internet connections, I've decided to randomly cut off my phone line, forgot to re-enable ADSL, leaving me floating in space on a 56K connection. Surprisingly, many of the new MMORPGs are immensely playable on 56K, with an acceptable level of internet lag.

"Many new MMORPGs are immensely playable on 56K, with no lag..."

Bored to the point of playing with some retail games? *The Dome of York* expansion for *Meridian* (www.meridian.com) has been delayed. Originally planned for April, there's no fixed release yet, although the patches are coming thick and fast, providing some much-needed content. *Dark Age of Camelot* (www.darkageofcamelot.com) has seen a revival since the release of the *Shrouded Isles* expansion pack, the first of three add-ons this year. *Project Entropia* (www.project-entropia.com, reviewed last month) has seen an increase in content, showing some improvement from the way it was when we reviewed it.

Another step away from the global warming, bearded old man stereotype is *Sins of a Solar Empire*. Twisting elements from games such as *Command & Conquer*, *ToD* is an online-only RTS which has been in development for some time now, and rather than a perpetual world system like the majority of MMOGs, *Time of Defiance* is a games that last from a week to a month. Go to www.nicelycrafted.com/tod/ to see a demo in you're an RTS aficionado.

ANDY McGREGOR
andy.mcgregor@futurenet.co.uk

↘ CUSTOMISATION

CASE MODS

MOD OF THE MONTH

Excusing himself from the competitions, Dan Griliopoulos went searching for some cases at the i15 Multiplay event.

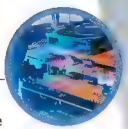


We've done flashy, so this time we're doing power. Marathon man Nick House's case first caught our eye at i15 with its good looks– a tall silver monolith dwarfing the primitives clustered about its solid refrigerated base. Approaching with trepidation we found, that at the frozen heart of it was a P4 3GHz CPU, overclocked to run at a stable 4GHz. How? Well, if you too want to learn how to invalidate the warranty on every single part of your PC, read on. **PCF**



PROMETEIA MICRO FREEZER CPU COOLING UNIT £426
SUNBEAM BLUE LASER LEDS £12
INTEL P4 3.06HT CPU £422

Nick lapped the copper freezer plate to a mirror finish, added some Shin-Etsu thermal compound, moved the freezer head closer to the motherboard, and used washers to increase the pressure on the CPU. Overclocked to a surprisingly cool 4GHz.



CRUCIAL RADEON 9700PRO £233
TWEAKMASTER BGA RAMSINKS £23
ZALMAN ZM80A-HP VGA HEATSINK ASSEMBLY £29

The supposedly cool-running chips produced too much heat – the solution was tiny (lapped!) heatsinks fitted on each of the eight memory chips, a Zalman heatsink fitted to the front of the card, and a fan to the rear with an attached Zalman speed controller to keep fan-whine down.



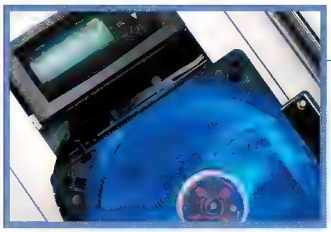
ASUS P4G8X DELUXE GRANITE BAY MOTHERBOARD £163
HEATSINKS £VARIOUS
40MM FAN £VARIOUS
CUSTOM BIOS £VARIOUS

Every single chip or MOSFET on the mobo has had a heatsink bonded on to it with Artic Silver 3 Thermal Epoxy, and the Northbridge had a fan fitted. The custom BIOS forces the Granite motherboard to use its RAM at higher speeds.



LITE-ON 48X CD-RW DRIVE £39
TOSHIBA SD-M1612 16X DVD £37.50

He also removed the existing blanking plates and Dremeled them to ensure they didn't catch, added foam padding, then rebuilt the fronts so you can see the LEDs and open them outside of Windows.





PROMETEIA ALU CONVERSION KIT £94

The freezer system is surrounded with an aluminium kit; a LED-modded Enermax 120mm fan also helps out the heat exchanger.

www.CoolCaseMods.com
Customised for YOU, so YOU don't have to.

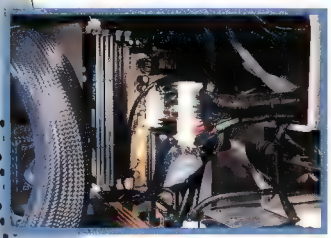






LAPPING

Normally heatsinks are machined to the correct shape, but this leaves distinct grooves across the base which reduce heat transfer by a small amount. Normally, heat compound fills in these gaps – however, serious modders such as Nick prefer to use lapping. This consists of using progressively finer gradations of silicon carbide paper and water to achieve a perfectly flat mirror finish. Nick used this on his CPU, the cooler head and all the custom-shaped heatsinks on the motherboard.







Case notes

Modding medic Chris Horsnell keeps his head above water

Computer components and water are usually a pretty bad combination. But when waterjets combined with a few extra bits of kit, it can make an efficient, quiet and surprisingly safe cooler. You only need a few components – a CPU waterblock, water pump, reservoir, radiator and rubber hosing. It's important to make sure all the bits of kit you get have appropriate size nozzles to the size of rubber hosing – 13/10 mm is the most common.

The waterblock is a fiddly bugger, made out of copper but sometimes aluminium. Ensure you pick the right one for your CPU – Intel or AMD, socket or slot. Another consideration is the surface area: the larger it is, the more contact with the CPU and the bigger the heat exchange. The pump's main job is to keep the water flowing around the circuit at a decent pressure.

"Computer components and water are usually a pretty bad combination..."

A reservoir is good, but not essential. Quite the one in your living room – hot water is pumped into veins in the metal, and the heat passes through it from the water veins into the surrounding environment. To aid this process, most radiators are also equipped with fans. They can be set to blow cool air on to the radiator, or suck hot air off. This is down to personal preference to both and see which cools best.

The rubber hosing pipes the water between the pump, the block and the radiator, then back to the pump again. To make sure the joints between the hose and the component are tight, the components have barbed brass hose nozzles, and are tightened on with small metal hose clamps (much like the plastic cable ties we love using inside of a case).

The principles of CPU water cooling equally apply to hard drives, graphics cards and even RAM. You can purchase a decent kit from www.coolcasemods.com (in the water cooling section). We stock the Poseidon kit, which includes absolutely everything you need, so you can get straight down to setting it up as soon as it arrives, safe in the knowledge that all the components are compatible.

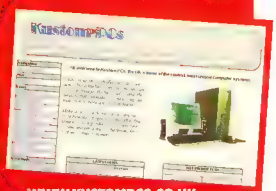
CHRIS HORSNELL
chris@coolcasemods.com

ITX-URL

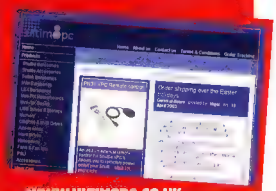
A collection of min online marvels



WWW.MINI-ITX.COM
The Projects section of this dom Mecca for miniature modders. It has dedicated news section and the lush mini-ITX visuals available anywhere



WWW.KUSTOMPCS.CO.UK
Scotland-based online store with mini-ITX flavours to suit all palettes. Its basket-based e-commerce engine is simple to use and secure. (We know, we've bashed the tyres on it several times.)



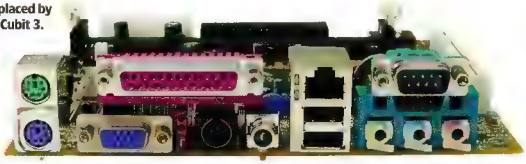
WWW.ULTIMATEPC.CO.UK
Self-proclaimed one-stop-shop for all your small form factor needs. It ships next day and accommodates even the most exotic of requests (don't take that the wrong way).

CUBIT METERS

The meat on the bare bones.

Following a brief chat with Angus Morrison from Stroud-based Net Box (**www.netbox.co.uk**), we can reveal the imminent arrival of a new bare-bones mini-ITX solution: the Cubit 3. The aim of the project is to provide a range of tailored components around a self-assembly Epia M10000 Via C3 3 (1GHz embedded CPU) As well as the standard FireWire, USB 2.0 and so on, Net Box aims to provide some revolutionary upgrade options including three NIC cards, enabling the unit to be used as a router, and PCMCIA support. Like its off-the-shelf predecessor, Cubit 2, the box itself will be available in 11 anodised colours.



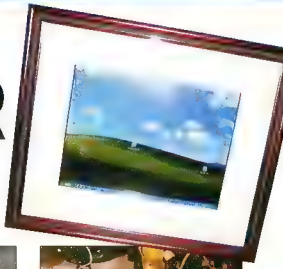


The Cubit 2, one of the only off-the-shelf mini-ITX solutions available, is hand-built to perfection. Soon to be replaced by the equally cube-alicious Cubit 3.

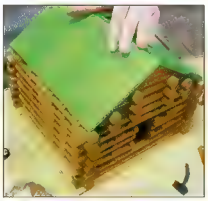
MINI-ITX CASE MODS

MINI SUPER

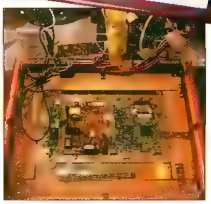
A PC in a petrol can – whatever next? The future is tiny, says **Jason Bradbury**



One of the greatest ironies of the post-industrial age is that while computers have become smaller and more powerful, the standard office-issue grey PC tower has remained half-metre high and as thick as a shoe box. So bring on the modders, that handy band of hardware hackers who'll plant a fan in anything if it's not tied down. Within their ranks is a swelling sect of minimalists who believe their custom windows, neon tubing and lasered curves are best complemented by the smallest box possible. Welcome to the world of mini-ITX.



Wood you believe it? The Log Cabin PC by Greg Sowell – three words: what, why and wow!



The Picture Frame PC. Oddly enough, a design with a simple and practical application.

Mini-ITX madness

One of the fundamentals of custom rigging is the concept of form factor: the footprint of a standing component. Standard ATX towers are at the big end, mini-ATX somewhere in the middle, with the diminutive mini-ITX currently the smallest standard, casting a shadow of just 170 x 170mm. When you're talking that small, a host of new possibilities raises its tiny, surreal, dwarfish head. Forget in-car PCs, how about in-radio-controlled-car PCs? Don't knock it – Sweden's Clarre Strand has filled both a model Ford Focus and Volvo S40 with PC guts (**www.mini-itx.com/projects/htpc2/**)

Toasters also hold a fascination in mini-ITX circles, along with beer cans, mantelpiece clocks, lunch boxes, briefcases and old skool games consoles – all have been modified to carry fully working PCs with processors up to 1GHz. And don't think you've sampled computing in the open air until you've booted up a model log cabin.

Set-top box designs – compact media centres that offer PC flexibility but don't look out of place next to a VCR – are another popular sub-genre, but if the mini-ITX movement has a totem, it's cuboid.



Dinky toys

The cube is definitely the shape of choice for the modder with miniature aspirations. No coincidence, then, that the family of motherboards behind this trend is symmetrical. Seminal mini-ITX motherboards predominantly come from the Epia family, manufactured by Via Technologies (**www.via.com.tw**) Dinky, quiet, relatively cool running and consuming less than 100 watts, mini-ITX boards have embedded CPUs. Entry-level is the Epia 800 (MHz) mini-ITX motherboard with on-board fan, priced around £85. A quieter but less punchy alternative would be the Epia M6000 fanless, with 633MHz processor, DDR memory support and MPEG 2, priced around £90. If you have just over a ton to invest and you're not angling for noise reduction, the M10000 offers a top of the line 1GHz C3-E CPU with on-board AGP graphics including TV-out, DVD decoding and an impressive spec sheet (including 1x DDR RAM DIMM slot, six-channel AC97 sound, SPDIF out, 10/100 NIC, 2x USB 2.0, 2x ATA133 IDE, 1x floppy, and serial and parallel ports)

Toasters hold a fascination in mini-ITX circles, along with beer cans and lunch boxes

Although Via's Epia boards dominate the genre there is a growing band of alternatives, including the first P4-based mini-ITX embedded motherboard from Commell, the LV-670 (**www.commell.com.tw**)

Mini-ITX is clearly a cult with a future, but beware: as more firms wake up to the commercial possibilities of Jack-in-a-box PCs, we might witness an invasion of novelty computers. **PCF**





(We believe that greatness speaks for itself.)



Presenting the Award-Winning TruePower Power Supply Series* from Antec

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Antec
The Power of You

For a list of resellers carrying TruePower near you, please visit www.antec-inc.com/Truepower_EU_resellers.html

* Includes 330W, 380W, 430W, 480W, and 550W models as well as our TrueBlue 480 and TrueControl 550

PROCESSORS

HARDWARE HACKS

ON THE DISC

TRICKS & TIPS

>>PROCESSOR ID

CONFIRMATION
You have to be pretty quick to see the processor settings as your machine boots up assuming your BIOS displays such information that is While the benefits of your tweaking should be evident in benchmarks it's still good to get positive confirmation of your speed increase

WCPUID
This is where the informative WCPUID comes in it's on the coverdisc It hids a huge amount of info about your processor and gives definitive bus speed and multiplier readings It isn't the prettiest utility you'll ever install, but it's an essential overclocking tool all the same

Overclocking is easy, and despite **Alan Dexter's** proclivity for visiting 'specialist' websites, you don't need any special equipment to get started.

Last month we covered the whole area of overclocking your graphics card, but we may have been getting slightly ahead of ourselves by looking at tweaking your graphics card before squeezing every ounce of performance possible out of the brains of your system first. This month we're going back to basics a little by looking at the speed increases that can be garnered from running your processor at faster speeds than it was originally designed for

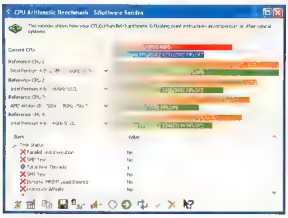
There's nothing new about overclocking your processor, and both Intel and AMD have introduced systems that hinder some of the more traditional overclocking tricks. A processor's operating speed is defined as the product of its front side bus (FSB) speed and its multiplier setting. So, for instance, a 2.2GHz Pentium 4 is actually defined by its 100MHz FSB and its 22x multiplier. Affect either one of these settings and you increase the speed of the processor. Adjusting the processor's multiplier setting is now impossible for Intel's processors, and it's pretty tricky for AMD's too, but you can still overclock these chips using the front side bus.

Tinker, tailor...

Motherboard manufacturers realise that there is a large community of enthusiasts who enjoy tinkering with the frequency settings in their machines, so most new motherboards offer some form of FSB tweaking. Such tweaking is generally accessed using the BIOS Setup utility or, in some cases, via software within Windows. Whichever system is supported by your motherboard, you should find that fine control over the FSB and 1MHz steps are now quite common. This means that your machine should have all you need to try a little overclocking yourself, and as long as you keep the increases to an experimental minimum, you shouldn't even need to invest in additional cooling for your PC.

This latter point is important because overclocking can produce a lot more heat than operation at the default settings, and as the temperature climbs, so does system instability. Increase the processor speed too much (don't forget to multiply the increase in the FSB by the processor's multiplier setting) and you

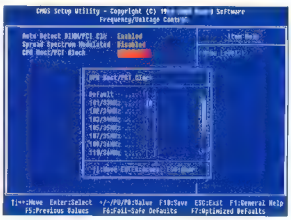
>>FIRST STEPS



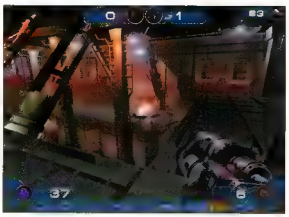
01 BENCHMARK Start by benchmarking your current system so you can tell exactly what performance increase you've achieved. We recommend using *Sandra 2003*, *Unreal Tournament* and *3DMark*



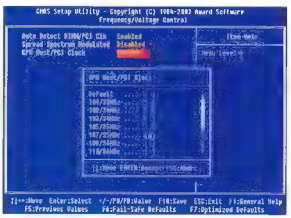
02 CMOS Restart your machine and enter the CMOS Setup utility by hitting either [F1] or [Del] as your machine starts. Find the section that enables you to define frequency settings.



03 SPEED UP Your first attempt at overclocking should be a small increase, of only 1 or 2MHz, to see if your hardware is up to it and whether you have sufficient cooling present.



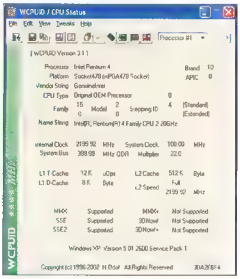
04 UNREAL Save the changes and reboot into Windows. Run the *Unreal Tournament* benchmark again to stress your system and make sure that everything is working properly



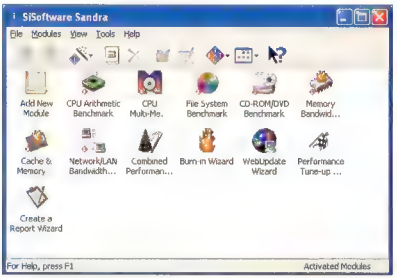
05 SLOW DOWN If you have a problem, slow down your processor a little before trying again. Alternatively, you could up the speed a little bit more and then retest



06 ON YOUR MARKS Once you're happy with the speed increase, you should check your system stability using *3DMark*. If it benchmarks fine, then your system should be stable enough for normal work.



H. Oda's *WCPUID* is an essential part of any overclocking toolbox, giving precise frequency and multiplier readings.



***Sandra*'s CPU Arithmetic Benchmark will record the biggest increase as a result of your overclocking, so this is definitely a tool worth having in your benchmarking arsenal.**

could even fry the processor. On a more positive note, Intel uses a temperature sensor in the core to slow down the processor if it gets too hot, and AMD will be introducing similar technology in its next generation of processors. If you're at all serious about overclocking then you need to get yourself a bigger fan at the very least, and for the really serious PC tweaker, water-cooled solutions aren't completely unheard of.

One of the most important things to realise when it comes to overclocking using the front side bus is that it generally affects the other system buses. This means that increasing the FSB affects the AGP, PCI and ISA buses at the same time, which can then introduce problems to any devices that are using those buses. Some devices, such as certain soundcards, can be extremely sensitive to changes to the PCI bus speed and they can make the whole system unstable if you inadvertently increase this bus by as little as 1-2MHz. On the other hand, sturdier components can benefit from the increase, and they will perform a little bit faster than they did before.

The more observant of you will have noticed that we said "generally affects the other system buses", because there are motherboards available which treat each of these buses as completely independent entities. Such motherboards are extremely attractive solutions for those looking to overclock because they either generate clock signals for each bus separately or enable you to set bus speeds as a fraction of the FSB.

No matter which motherboard you have, you should find that you can eek a little more performance out of your system by following the walkthrough on these pages. **PCF**

"For the really serious tweaker, water-cooled solutions aren't unheard of."

KNOW YOUR BENCHMARKS

Benchmarks come in all shapes and sizes, and you'll need to use more than one to squeeze the best performance out of your system...

There are a couple of things to bear in mind when benchmarking your overclocking attempts. While the likes of *SiSoft Sandra 2003* will give you a good indication that the processor is running at the correct speed, it won't tell you what impact this will have on your overall system performance. This is why we advocate using a real world benchmark like *Unreal Tournament 2003*, and a synthetic benchmark, such as *3DMark*, in addition to the excellent *Sandra 2003*.

When it comes to *3DMark*, and to some extent *Unreal Tournament 2003*, it pays to set the screen resolution down to a low level. This will ensure that the results you get from the benchmark aren't bottlenecked by the capabilities of your graphics card. And while we are interested in overall performance at any resolution, when it comes to overclocking the processor, you want to get as much feedback as possible. If you'd like to improve your graphics performance even further, you can always overclock your graphics card afterwards.

While we recommend using two benchmarks to check the validity of your overclocking attempts, they actually have different uses, defined by the amount of time they take to run. The *Unreal Tournament 2003* benchmark (type `C:\UT2003\System\Benchmark.exe` into the Run command to start it) is quick to complete and should be used as a speedy test, while *3DMark 2001 SE*, set to run three iterations, is a great way of testing system stability and performance. If you've got a DirectX 9 card then you can use *3DMark 2003*. We've put *3DMark 2001 SE* and *SiSoft Sandra 2003* on the disc for you.



Mods & rockers

Hardware hero **Wil Harris** reports on this year's CeBit

However, as it turns out, these 10 weeks of the year it's a relatively small German city that's pretty quiet and unassuming. One week a year, however, it is turned into the centre of the IT industry as CeBit, the world's largest IT show, comes to town.

CeBit is possibly the most bizarre of the IT trade shows, mostly because it's not really a trade show – ordinary punters are allowed in to check out the happenings, and this creates an extremely strange atmosphere. Kids are running around, seemingly desperately trying to get all the freebies they can while simultaneously taking as many photos as they can fit on to their memory cards. Meanwhile, the CEOs and reps from thousands of companies are trying to do business deals and give journalists a peek at their latest products. Such a hotch-potch vis[illegible] like a good idea when it

"It's apparent that the days of beige boxes are well and truly numbered."

[illegible] computer industry, which it is sometimes easy to detach yourself from when you're working in the business.

So what did we see that was exciting? The thing that was apparent was that the days of beige boxes are well and truly numbered. I went round an entire pavilion of case manufacturers and the ratio of cool case to boring ones was at least 2:1. It seems that even the mainstream industry is waking up to the fact that consumers are demanding more, and this can only be a good thing.

As I sit here writing, I have music playing in the background, and thinking about modding while listening to music has got me wondering about what cases are missing that no one at CeBit seems to have picked up on. Case mods appeal to the senses of sight and touch, but not taste, hearing or smell. I'm not suggesting scratch 'n' sniff cases, but it makes me wonder what could be done with sound. Imagine a case window with a built-in waterfall, so the steady trickling and splashing of water replaces the annoying whirr of fans. What about pulsating case lighting that beat in time to some chill-out tunes? Hmm, I think I'm going to have to go and research water...

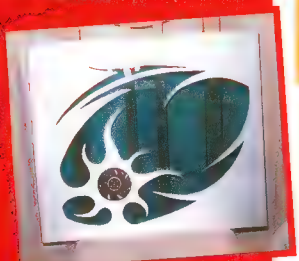
WIL HARRIS
http://bit-tech.net

Hardware mod news

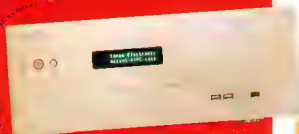
Wil Harris keeps a careful eye on the modding community



THE RAT PACK
Ratpadz.com has released its new v2 Ratpad, the G.S. Normally a mousing surface isn't much to get excited about, but when it's the nicest damned mousing surface in the world, you owe it to yourself (and your rodent) to take a look. Head over to **www.ratpadz.com** for the info, and you can pick one up in the UK from **www.theoverclockingstore.co.uk**.



TATTOO TABOO
Moddin.net has pulled out a mean tunic mod. Based on a tribal tattoo design, these UK kids have designed a pretty swish case. There's also a really good pictorial of how to take a design to Dremel... Check it out at **http://moddin.net/project.asp?ProjectID=11&PageNo=3**.



THEATRICS
If you're looking for a sweet case for a home-theatre PC, look no further than this baby from Accent. It comes in black, gold and silver (so matches whatever your hi-fi setup looks like), it also has an LCD display, and to top it off, takes a standard ATX motherboard and power supply, so you don't have to compromise on the specification of your machine. You can get one up from **www.kustompcs.co.uk**.

WIL HARRIS
http://bit-tech.net

EXTREME CUSTOMISATION

DESKTOP ENVY

ON THE DISC

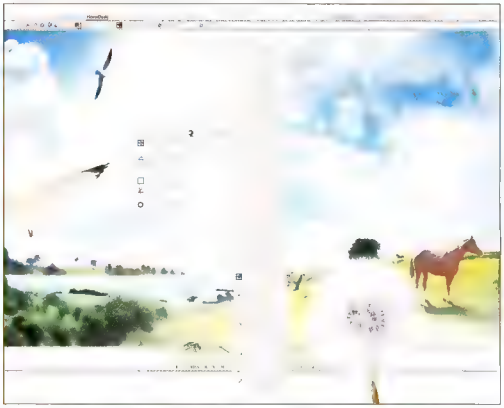
With his blue rinse and crotchless cords, **Graham Barlow** likes to stand out. Your PC can, too, if you create your own themes.

TRICKS & TIPS

>>VIRTUAL DESKTOPS

SIMPLE THINGS There are many great features worth exploring in *HoverDesk*. The first is virtual desktops. In the SimpleStuff theme that runs by default, you can access up to four different desktops at once.

MORE THE MERRIER Simply click the desktop number in the **Active Desktop** section of the taskbar to switch to a new desktop – this approach enables you to work on many different files at once, because you're no longer limited to how many you can fit on your screen.



Imayan 5th from www.skinbase.org is, unsurprisingly, the fifth skin created by the author Imayan for *HoverDesk*. Ah, you can almost smell those flowers...

Are you bored with loading other people's themes for Windows and fancy creating your own instead? Well, you've come to the right place, because we're going to introduce you to a couple of great utilities that enable you to do just that. So far in this series we've shown you how to use the majestic *Style XP* for sprucing up your Windows XP desktop, and how to replace your desktop shell entirely by using the mighty *LiteStep*. We've presented you with the opposite poles of the Windows customisation spectrum: *Style XP* is a simple, idiot-proof Windows customisation tool, while *LiteStep* enables all sorts of extreme customisation options but requires a steeper learning curve and lots of time to master.

"*HoverDesk* makes it easy for you to create your desktop"

If you want to get creative with your desktop and create some themes but don't want to embark on an expedition of Everest-like proportions, you could do with something in between these two extremes. What you need is a tool that has the simple menu and wizard-based approach of *Style XP* but with the sort of customisation features you see in *LiteStep*. The answer is *HoverDesk* (**www.hoverdesk.net**), which we've put on this month's coverdisc.

Button moon

First off, let's explain what we're going to do here, and what we're not. If you want to create an entire theme from scratch, you need to be something of a graphic artist. You have to be able to design great-looking buttons, windows borders and backgrounds. We're not even going to go there, because that's an entirely different kettle of fish. Instead we'll show you how you can take pre-existing graphic elements and create a theme with them.

Before we go any further, we should mention *StyleBuilder* from **www.tgtsoft.com** – the same people who brought you *StyleXP*. *StyleBuilder* is a tool for theme designers,

WEB SITES

Grab yourself some *HoverDesk* themes online.

Art Uproar

Deskmod

Titan

SkinBase

NORthX Unlimited





The Evolution theme for *HoverDesk* from www.titanskins.cjb.net. Minimalist but very functional in an *Aliens* sort of way.

offering a simple way to navigate all the bitmap images and specify the hundreds of settings that make up a visual style. And naturally, we've also put it on the disc for you.

StyleBuilder is fine if you want to stay within the Windows XP environment, but how about something a little more exciting? *HoverDesk* is a powerful desktop replacement system. It sits on top of Windows, and puts the sorts of features at your fingertips that make Bill Gates go a grassy-hill shade of green with envy. Follow our walkthrough for installation tips and then play around with it for a while – you'll find it's extremely flexible and easy to understand.

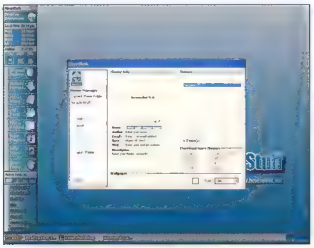
Hover craft

The real joy of *HoverDesk* is that it makes it easy for you to create your desktop – you have total control over the way your desktop looks and works. We've included a brief four-step walkthrough here showing you how to get started with theme creation in *HoverDesk*, but we don't have the space to cover all aspects of this feature-packed tool, so we'll refer you to the excellent online tutorial at **http://honz.hoverdesk.net/hvdtut_welcome.htm**.

Enjoy yourself creating desktops with *HoverDesk* and don't forget to tell us how you get on. **PCF**

>>YOU THEME FAMILIAR...

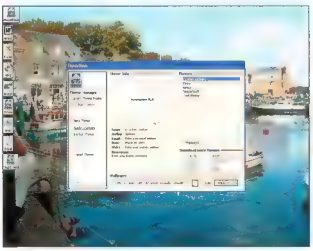
Now create your own themes for *HoverDesk*.



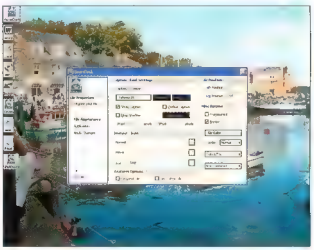
01 **THEME BAR** To design a new *HoverDesk* theme, you select the **Theme Manager** by right-clicking the desktop and going into the *HoverDesk* menu. Click the **New Theme** button and type in your theme name, author name and other details.



02 **CREATE STATE** Once you've done that, click the **Create!** button. Now you need to select your new theme to start working on it. Go back into the **Theme Manager** and select your theme. You now get a desktop that looks like this one.

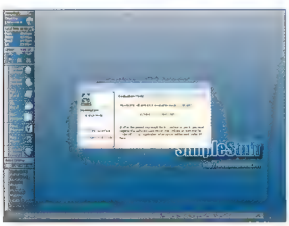


03 **IMAGE CONSCIOUS** The first thing you'll probably want to add is a background image. Right-click on the **HoverDesk** button at the top-left and choose **Theme Manager**. At the bottom you see a field for selecting a background. Choose a good picture from your hard drive.



04 **EDIT AWE** You can edit each of the individual icons on the screen by right-clicking on them and choosing **Properties**. Work your way through the online tutorial and you'll soon discover how to change almost every detail of your desktop.

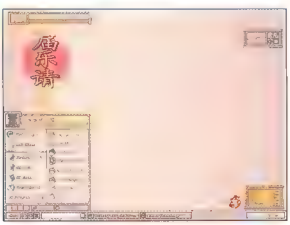
>>LESS BOTHER WITH A HOVER



01 **RUNNING FREE** The first step is to install the trial version of *HoverDesk* from the coverdisc. It's unrestricted and runs for 30 days, after which you need to register to continue using it. This is what *HoverDesk* looks like when it's run for the first time.



02 **ICONOCLAST** Experiment with the icons in the taskbar – *HoverDesk* has linked the icons for *Word* and your MP3 player to the apps on your hard drive. Right-click the desktop and choose **HoverDesk → Configuration** to see what themes you have available.



03 **TURNING JAPANESE** We've chosen the Japanese-flavoured Ginza theme here. It opts for the more conventional Start menu and taskbar along the bottom of the screen. You can download more themes from **www.hoverdesk.net** or create your own.

STRIP BACK XP

HACK WINDOWS

SKILL LEVEL

TIME TAKEN 30 MINUTES

Regain vital system resources from XP and boost performance. **Nick Peers** gives the bloated OS a much-needed strip down.

TRICKS & TIPS

>>FASTER SHUTDOWN

WHAT'S GOING ON? If you've noticed that XP is taking longer to shut down, it's because a service is refusing to shut down properly. By default, XP waits 20 seconds before intervening, and this can obviously lead to a delay.

SLASH SHUTDOWN TIMES You can shorten this delay with a Registry tweak. Browse to **HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control** and change the **WaitToKillServiceTimeout** to a new figure in milliseconds (we suggest 5000).

Fancy indulging in some streamlining? Hold down [Ctrl]+[Alt]+[Del] and switch to the **Processes** tab. All of those processes are currently running in the background, eating away at your system resources. Sure, some are vital to the running of your system (explorer.exe comes to mind), but others aren't. Others are needed occasionally, but are set to start with Windows and always be there like an irritating itch.

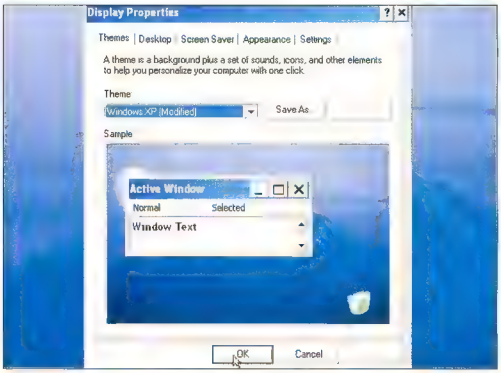
The good news is that there's something you can do about it. All of these processes are known as services, and can be set to one of three states: Automatic, Manual and Disabled. The walkthroughs show you how to work out which ones you need, plus set them all accordingly with the Services Management Console. Meanwhile, here are some pointers to help you on your way.

Some dos and don'ts

The following services should always be left on Automatic: Plug and Play, Remote Procedure Call, Shell Hardware Detection, Windows Audio, Windows Management Instrumentation, and Workstation. If you have a printer, leave Print Spooler alone, too, while anyone with external drives should leave Logical Disk Manager alone. Got a keyboard with extra buttons? Don't touch Human Interface Device Input either.

But what of those other services that are currently set to Automatic? You could try the three-step walkthrough below, but if you're pressed for time and want some general guidelines, here are a few services you can consider targeting by changing them to Manual. If you're not monitoring a network server, change the Alerter and Messenger services to Manual. And because you're not installing software all the time, it also makes sense to switch both Application Management and Windows Installer to Manual, too.

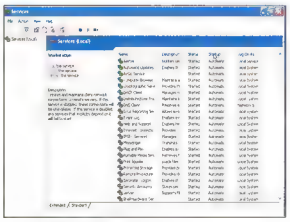
If you don't use Internet Connection Sharing or the XP firewall, switch Application



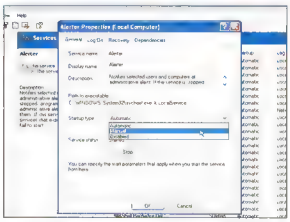
Stopping some services can have an unexpected effect. The Themes service is required for the chunky blue dialog boxes, for instance.

"Processes are running in the background, eating away at your system resources"

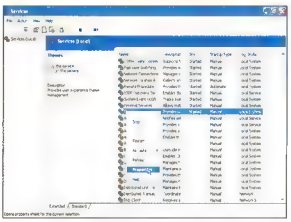
>>SERVICES NO LONGER NEEDED



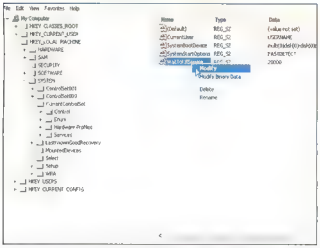
01 CONSOLE YOURSELF Open the **Services** console (click **Start→Run**, then type **services.msc** and press [Enter]). Expand the window so everything's in view, then click the **Startup...** tab to show all of those services that start automatically.



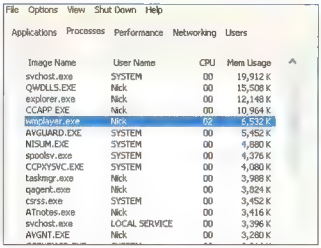
02 MANUAL LABOUR Double-click each service that's set to start automatically in turn, and set the **Startup type** to **Manual** where possible (see the intro text above first). Once done, reboot – Windows takes a bit longer to boot as it finds the services it needs.



03 USE AND ABUSE When Windows has reloaded, open and use those applications you normally use. After about 30 minutes, re-open the **Services** console and this time click **Status** twice. Any services with **Started** next to them should be set to **Automatic**.



XP slow to shut down? Reduce the deadline for services to behave themselves with this Registry tweak.



The Processes tab reveals just how many services are running, and how much memory they're gobbling up.

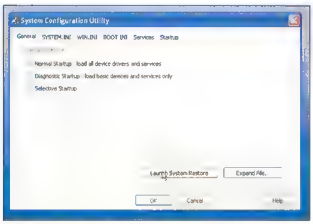
Layer Gateway to Manual along with Internet Connection Firewall/Internet Connection Sharing. Prefer the Windows Classic look? Set Themes to Manual, otherwise leave it alone.

Why not disable?

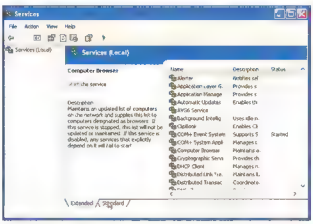
There are dozens of other services that can also be set to Manual, depending on your circumstances. Make sure you have a Restore point in place, then browse the list in the Services console in Extended view, because that gives you a brief description of each service. If you want even more information, check out DeviantPC's own guide at **www.deviantforums.com/showthread.php?s=&threadid=1926**. While it's tempting to disable those services you no longer need, you might like to hedge your bets a little – while set on Manual, those services won't be started unless they're actually needed, and you never really know when they might be required, so it makes sense to keep them available, just in case. **PCF**

>>CHANGING SETTINGS

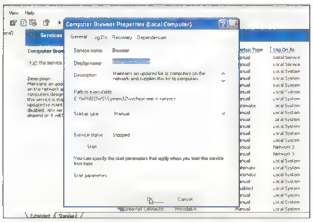
Get an extra spurt of performance quickly and easily.



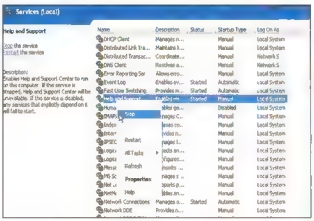
01 TAKE PRECAUTIONS Only a fool would proceed without giving themselves a place to get back to – just in case. Click **Start→Run**, type **msconfig** and press [Enter]. Click **Launch System Restore** and follow the instructions to create a Restore point.



02 SERVICE STATION To access the Services console, click **Start→Run**, type **services.msc** and press [Enter]. The **Extended** view gives you information about each service, but you need to expand the console to the full screen to see it – otherwise, select the **Standard** tab.



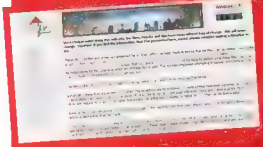
03 PATH FINDING Double-click a service to find out more about it – the **Path to executable** box reveals what name the service goes under in the **Processes** tab of **Task Manager**, for example. Change a service from **Automatic** to **Manual** or **Disabled** from here.



04 STOP WATCH You can stop or start selected services for the current session by right-clicking them and choosing the appropriate option. A good time to stop a service is when closing its parent application – the service is often left running (Help and Support is one example).

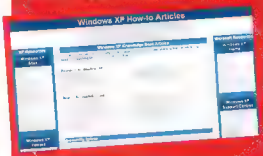
Online resources

Looking for more tips and tricks? Here are three justifications for your net bill.



DOUG'S WINDOWS TWEAKS AND TIPS WWW.DOUGKNOX.COM

This one's for all flavours of Windows, 95 upwards, and's a huge collection of Registry tweaks packaged in VBS files. Download one, run it and the Registry is applied for you. If you're reticent about accessing the Registry (it's a perilous, though we don't have to tell you to back first...). There are also some other useful [illegible] sections – Other Tips contains a few links [illegible]



WINDOWS RESOURCES CORNER WWW.KAYODEOK.BTINTERNET.CO.U

This UK-based site has some excellent unique features, and once again caters for more than just XP – IE and other Microsoft products are covered, too. It's a collection of useful links, divided into product and topic, and makes it far easier to find what you want on Microsoft's Knowledge Base than by using the Knowledge Base's own hit-and-miss search engine. Even the front page has some superb links – 18 useful [illegible]



NTFS.ORG WWW.NTFS.ORG

As the name suggests, this one's specifically for NTFS. It's one of those all-encompassing sites for Windows 2000 and XP users, with a front page dedicated to news and a myriad of sections and links dotted around the place. If you're most use to those wishing to keep up to date [illegible] In addition to the news section there's also a list of the latest drivers available, plus links to service Packs [illegible]

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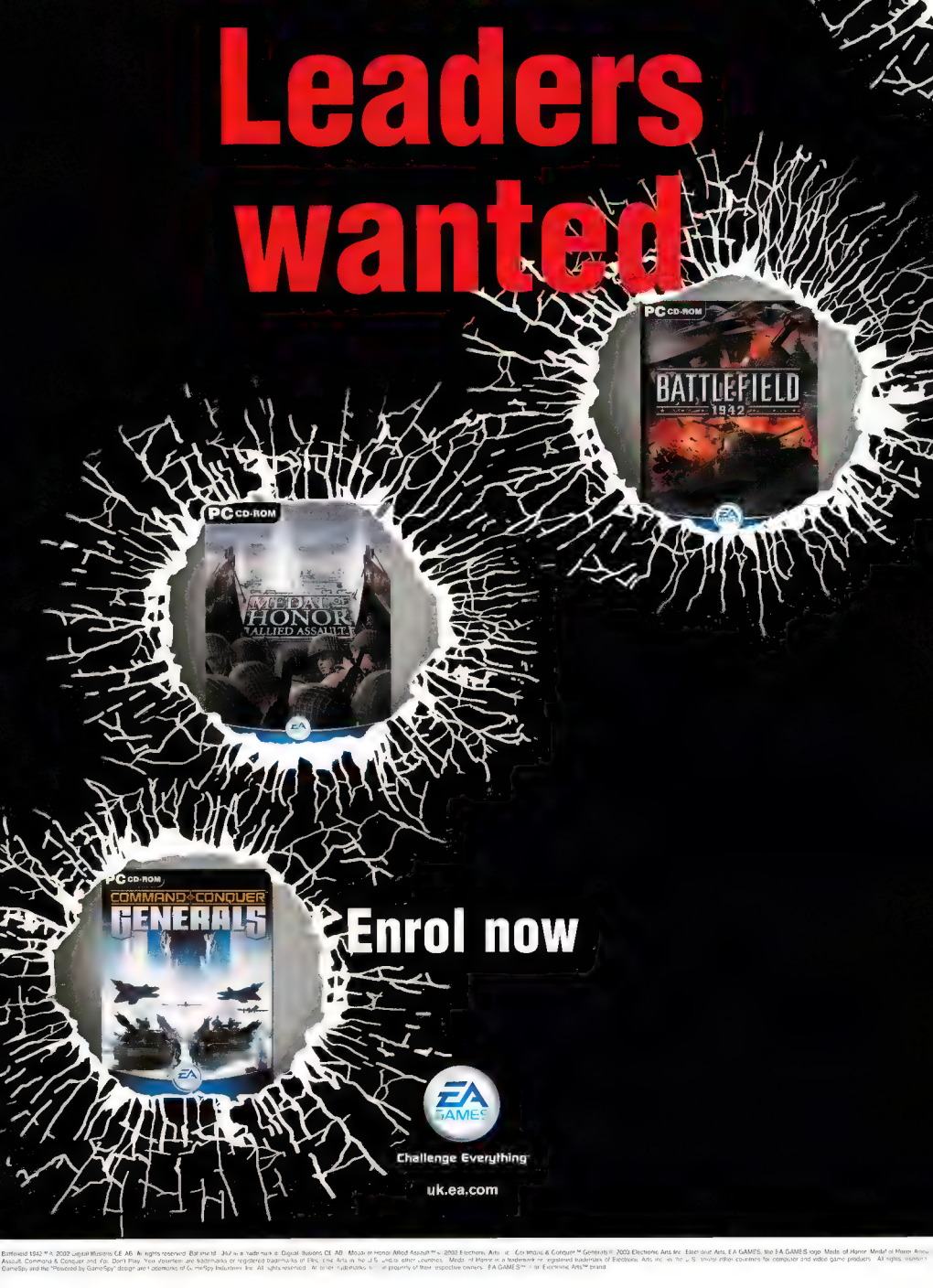
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How to...

Q&A/Technical support/Practical guides We'll learn ya!

NEED EXPERT ADVICE? Your questions answered! (p.180)



LIFE'S A BEACH

Around about this time of year, it is traditional for us slack-jawed scribes to make some sort of encouraging remarks about summer being just around the corner and allude optimistically to fierce sunshine, fiercer wasps and chicken drumsticks black on the outside but still pink and toxic within. However, we're a little more sympathetic to the horrors of the season here at *PCFormat*, so we have tightly crammed in some tutorials on everything from home robotics, through building a hardware firewall and editing your Registry, to getting the most from the brand new version of *Paint Shop Pro*.

This should improve your summer experience immeasurably by simultaneously keeping you indoors for the majority of the warmer months and allowing you to fake plenty of photographs of yourself having a good time while you're at it. Then come the autumn, you can wash off all that bottled tan and bask in the glow of synthetic nostalgia.

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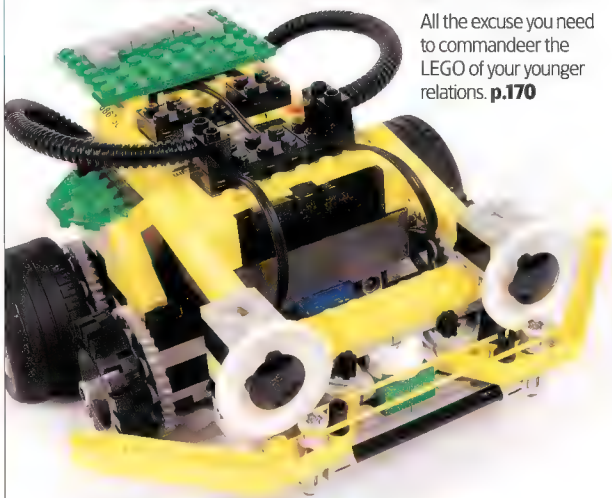
4. On the disc?
One of these fellas means it is!

ON THE DISC

DO IT YOURSELF

Surfed the net, played a few games, wondering what to do next? There are a few more things you could try...

BUILD A LEGO ROVERBOT



All the excuse you need to commandeer the LEGO of your younger relations. **p.170**



PAINT SHOP PRO 8

It's taken a while, but *Paint Shop Pro 8* is here and it's been worth the wait. We share a few tips to get the best from the graphical master.



BUILD A FIREWALL

Keep out unwanted guests by building your own personal bouncer in the form of a hardware firewall. All you need is an old PC and our guide.

Plus

171 EASYCLEANER
Clean up your Registry

173 PHOTO ALBUM
Make the most of digital photos

174 OGG VORBIS
Roll over MP3, Ogg Vorbis is here

175 PHOTO STORY
Create a multimedia presentation

178 WINDOWS
Two pages of Windows tips

180 ASK LUIS
If you don't ask, you won't get

ROBOT DESIGN

BUILD A LEGO ROVERBOT

2 HOURS

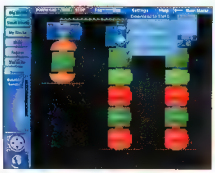
Did you know you can build programmable robots from LEGO? **Danny McAleer** 'bricks it' in the most pleasant way possible.

TRICKS & TIPS

>>SOFTWARE SETTINGS

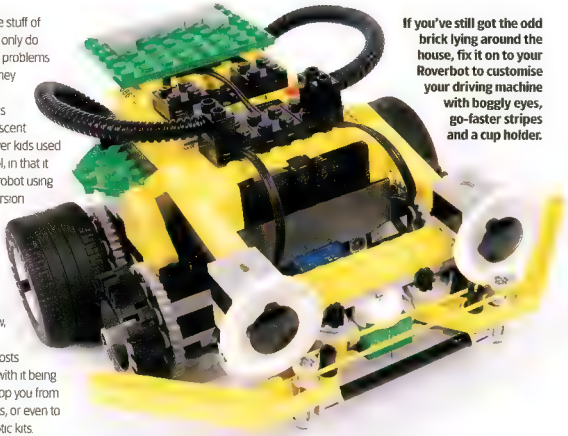
THE HEAT IS ON If you get the additional temperature control or rotation sensors for your robot system, you need to initialise them in the program's **Settings** box. Open it from the main page and click on **Advanced**. In here you also find buttons to lock certain programs into the RCX's memory, which can be useful.

MEMORY LOSS Incidentally, should you be suffering from missing interface elements and memory error problems, there is a fix program called switchexe on the CD-ROM in the **Troubleshooting** directory. Run this and switch the display type to 32.



The drag and drop assembly line method of programming your robot belies the abilities of the RCX (the programmable LEGO brick). It's really quite clever.

Robots aren't just the stuff of science fiction. Not only do they solve practical problems in loads of industries, but they make terrific toys, too. The LEGO Mindstorms Robotics Invention set is very reminiscent of those Turtle kits the clever kids used to get to play with at school, in that it enables you to program a robot using your PC, only the LEGO version is much more versatile. Any half-decent toy shop will be happy to sell you a box, but if you prefer not to tell blatant lies to the shop assistant about it being for a nephew, order it online at **http://shop.lego.com** (it costs around £160). Of course, with it being LEGO, there's nothing to stop you from using bricks from other sets, or even to combine two or more robotic kits.



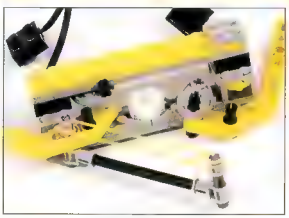
If you've still got the odd brick lying around the house, fix it on to your Roverbot to customise your driving machine with boggly eyes, go-faster stripes and a cup holder.

Block rockin' treats

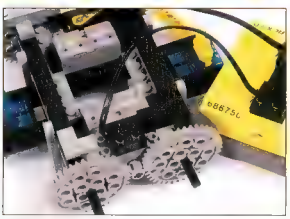
The standard Roverbot model is a good place to start. By all means modify it to incorporate your own ideas, but don't deviate too far from the wheel and gear setup or the bumper. However, do bear in mind that it is possible to connect several wire terminals on top of one another if you need more motor ports.

After a few hours and several dimpled fingers later, you should have something resembling the model in the photo, unless you've struck out and gone for a robot that's a little less conventional. Either way, once you've got to this point, the hard part's done. Programming your Roverbot to do stuff is remarkably easy. When you start the software, choose the **Roverbot** in the opening robot selection menu. This sets up the program so that all of the key commands applicable to this type of robot are put into the **Big Blocks** bin. Should you want to peruse the other **Big Blocks** available, you can always select the **Freestyle** option from

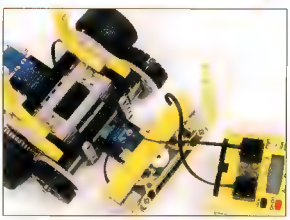
>>ASSEMBLING YOUR ROVERBOT Save time and blood pressure.



01 BUMP AND GRIND Make sure your bumper is tightly bound by the elastic band, and properly assembled. If it's not sturdily fixed to the robot, the bumper won't make good contact with the sensors when your Roverbot drives into something.



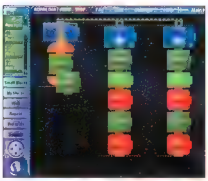
02 SLICK AND TYRED It's imperative that you use the chunky tyres for the Roverbot because of the manner in which it rotates to turn. It has no axles per se, rather it drags itself around by only engaging one of the two motors.



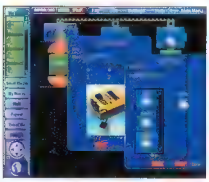
03 CONNECT FOUR The RCX (the programmable block) has six pads upon which to connect your wires. Attach the bumper sensors to Ports 1 and 3 and the motors to A and C. Connect the cables correctly or your robot will go backwards or round in circles.

>>ROBOT ROARS

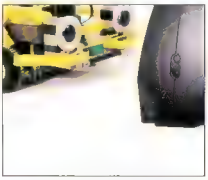
Create, transmit and execute your robot script.



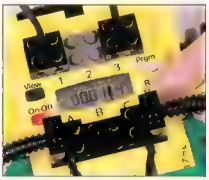
01 LIFE'S A DRAG In the **Program** section of the Mindstorms application, you can snap together modules to create your robot's program. To add a function or movement, you simply need to drag the component from the blocks toolbar on to the command list.



02 SENSOR SENSIBILITY The most critical part of the Roverbot program is responding when either of the sensors on the front bumper is activated. Choose the **Sensor** block and place it next to the main program line. Select the **If Clicked** option and attach an action after it.



03 TOWER OF STRENGTH Once you've clipped together your program, save it and then push the **Download** button in the main menu bar to try it out. Make sure the robot is close enough to the USB tower to receive the transmission.



04 RUN DOWN Once your program has downloaded to the RCX, press the **Run** button to set the Roverbot in motion. Alternatively, it is also possible to start the Roverbot from your computer by clicking on **Run** button in the program's toolbar.

the **Settings** menu. To add an action, scroll down the **Big Blocks** bin until you find what it is you want, then drag the block from the bin on to the page and let go. Just like LEGO bricks, you can then attach other blocks on to the end of the command line to string two or more actions together.

A good program to start with would be to make your Roverbot roam about and then turn around when it hits an obstacle. Use the **Repeat** block and within that insert the **Forward** block. So that it doesn't go on in perpetuity, you might want to add a timer condition, so that it runs for 30 seconds then stops. Next, drop **Touch Sensor** blocks on to your program, with the condition set to **Press**. The **Touch Sensor** blocks don't go in the vertical command line, but work as separate if–then–else–type programming strands. Add a reverse and turn left or right to the bottom of those stacks, so your Roverbot avoids the obstacle. After you've built something that you think might work, download your program and push **Run**. **PCF**



If you're looking to further develop your career as a LEGO robot engineer, you should take a look at the official Mindstorms site for more tips and tricks: www.lego.com/mindstorms.

↘ MAINTENANCE

REGISTRY EDITING

ON THE DISC

If editing the Registry freaks you out, get *EasyCleaner* to do it for you instead.

Mature Windows installations contain loads of unnecessary files and useless data that only serve to slow your machine down. It's a good idea to have a deletion session from time to time to keep your PC sprightly and responsive. However, it's not always easy to identify what needs to go. Registry entries also build up but going into RegEdit can often seem a little daunting, if not rather laborious.

If you don't feel comfortable with manual Registry editing, try using a dedicated program such as *Norton Utilities*, *Reg Clean* or *EasyCleaner*. These scan the Registry for unnecessary entries and present them to you for possible deletion. You often need to scan twice or try two different tools because no Registry cleaning tool is perfect. However, they'll probably pick up more than you can on your own.

EasyCleaner (**www.toniarts.com/dwnloads.htm**) is a great Registry cleaner because it's simple to use – and it's on this month's disc. XP and ME users need to install the patches XPFixhelp and MEFixhelp respectively. Without the patches, *EasyCleaner* deletes help files without warning.

Once you've scanned your Registry, *EasyCleaner* can scan your hard drives for identical duplicate files, giving you a more drive space to play with. **PCF**



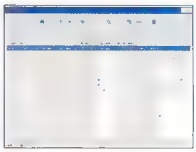
Get yer Marigolds on, this could get dirty...

>>SPRING CLEAN

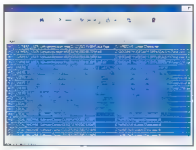
Your PC's annual spruce–up is long overdue.



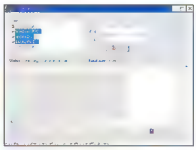
01 Install *EasyCleaner* along with the patches XPFixhelp or MEFixhelp as appropriate. Launch the program, selecting English as the language. Click Clean Registry.



02 On the following screen click on Find. This prompts *EasyCleaner* to have a look for redundant Registry entries. You'll be surprised at how quickly the list fills up.



03 Click on a key and choose Delete if you want to remove it. Click Select All to speed up the process if you are confident you can delete the whole lot.



04 Choose Duplicate files from the main *EasyCleaner* screen. Click Find to identify duplicate files or files with identical content. Select and delete as before.

IMAGE EDITING

PAINT SHOP PRO 8

50 MINUTES

The multi-talented *Paint Shop Pro 8* has arrived. The not-quite-so-talented **Stephen Copestake** reveals how to harness its power.

TIPS & TRICKS

>>TIMESAVERS

SCRIPT Fed up with applying the same changes to images time after time? You can use the **Script** toolbar to record editing amendments in a series of steps, then you can play them back in a couple of mouse clicks.

AUTOTUBER Even better, you can apply scripts to multiple pictures in one go. You also get some pre-recorded scripts. For instance, you can use **AutoTuber** to convert two open images into a picture tube, so you can then draw with them.

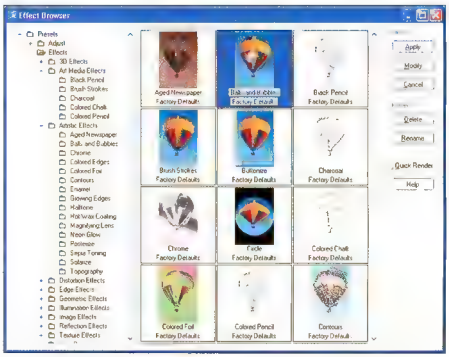


You can drag and drop program features just about anywhere on-screen, or create new toolbars and assign keyboard shortcuts.

Well, it's been a long wait, but by the time you're holding this issue in your hot little hands, *Paint Shop Pro 8* should have finally arrived with a fanfare of trumpets. Well, OK, relatively quietly, really, which is a shame because this is undoubtedly the biggest upgrade this program has undergone in one go. In fact, it's almost a completely new application. This must have had a lot to do with the delay – when a piece of software has about a million new lines of code, it's hardly surprising it takes a while to appear.

Luckily, the delay was worth it. There are zillions of new features but, if you use *Paint Shop Pro* a lot, there are three enhancements that will probably have a the biggest impact on the way you work. First, just about any changes you make to the app's defaults can now be saved as presets. So, if you're applying a special effect or customising text, you can save a particular result as a preset. When you create layers, you can save them as presets. When you create a new document with specific dimensions, background and colour depth, you can save it as a preset. Nearly all the tools now support presets.

OK, you get the picture. The second productivity aid is the use of scripts. You can now save any series of editing actions as a sequence of steps. Scripts are ASCII files, so you can easily share them with other *Paint Shop Pro* users or edit them yourself manually.



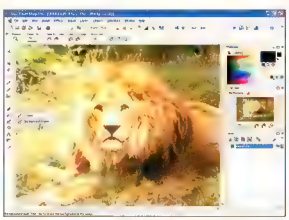
At last – you can preview multiple effects in the Effects Browser. To fine-tune one, just click it and hit Modify.

Custom house

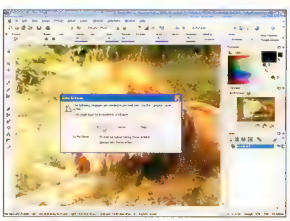
Thirdly, *Paint Shop Pro* is now fully customisable. You can put any tool or command on any menu or toolbar. If you don't like the default arrangement of toolbars and menus, you can create your own. Also, there are more palettes and you can now resize them and dock them on the side of the app's window. You can change any keyboard shortcut or create your own. In other words, you can now make *Paint Shop Pro* look and work the way you want.

Even better, *Paint Shop Pro 8* has loads of new features that relate to digital photos, including some great new effects. If your photos aren't all they should be, you can correct them in more ways than

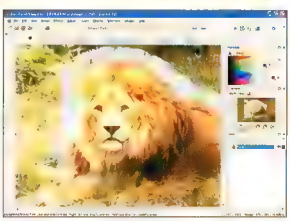
>>KEEP YOUR HAIR ON Clean up your images quickly and easily.



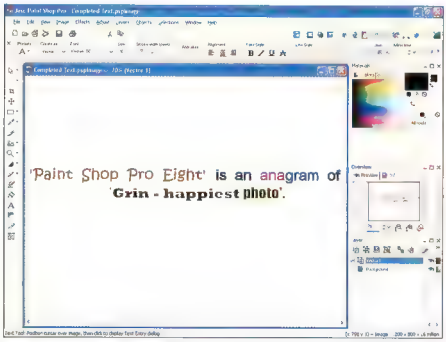
01 ERASERHEAD Digital photographers often have to take out superfluous backgrounds. You can now do this with far more precision. Open your photo, zoom in, then select the **Eraser** fly-out in the toolbar on the left. Select the **Background Eraser** tool



02 LAYER ABOUT Now click anywhere in the image. *Paint Shop Pro 8* prompts you to promote the photo to a layer. Hit **OK**. Notice how the new layer appears in the **Layer** palette, which is docked on the right of the screen



03 BORDERLINE CASES Fiddle with the settings in the new **Tool Options** palette at the top of the screen until you get them right, then drag round the border of the image. All those tricky bits, such as hairs, are detected and preserved



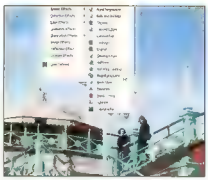
You can now apply formatting to text on a character-by-character basis.

ever If they come out distorted because of the angle of the image, use the **Perspective Correction** tool to correct this. Scanned in a photo in and it's all skew-whiff? No problem – just use the **Straighten** tool to get it right. Want to strip out a background? **Background Eraser** does this intelligently.

This has to be the must-have upgrade of the year. Download the beta version from **www.jasc.com/pbeta/psp/** and give it a try yourself. **PCF**

>>ELEMENTARY, WATSON

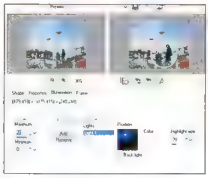
Make your own digital magnifying glass.



01 LIFE THROUGH A LENS Wouldn't it be great to magnify picture details selectively via a lens? Previously, you had to use a program such as *CorelDRAW* but *Paint Shop Pro 8's* version is on steroids. Hit **Effects ➔ Artistic Effects ➔ Magnifying Lens**.



02 MARQUEE MARK Fiddle with the marquee in the window on the left until you get the lens where you want it. Get the size right, too, and play around with the other settings. Changes are displayed in the **Preview** window on the right.



03 PROPERTIES LADDER Experiment with the settings in the other tabs. In particular, hit **Properties** to specify how shiny, glossy and opaque the lens is. Hit **Illumination** to amend the existing light source, add new ones or adjust the ambience level.



04 YOU'VE BEEN FRAMED Hit **Frame** to get the lens frame just right. You can choose a lens shape and thickness. You can also specify a material and colour or dispense with a visible frame. Hit **OK** when you've finished being artistic.

PAINT SHOP PRO

PHOTO ALBUM 4

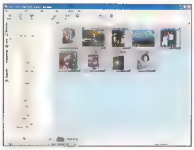
Organise your photos to within an inch of their life.

ON THE DISC

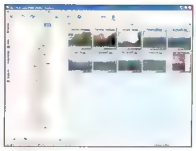
Got more digital photos than you can shake a Memory Stick at? You need *Photo Album 4*, then. Luckily, we've popped a demo of it on this month's disc. Where *Photo Album 4* really scores is in the myriad options you have once your photos are on your hard disk. You can apply effects (some unique and some more standard, such as red-eye removal and sepia) or hit [Ctrl]+[J] to open your photo in *Paint Shop Pro 8* for more intensive editing. Beyond this, you can create slideshows, transform convergent images into panoramas and convert albums into video CDs playable on your TV via newer DVD players. You can email photos in a format which is automatically optimised for download and stick your photos on the Shutterfly site (or your own) for others to share. You can also turn photos into screensavers. **PCF**

>>NOW THAT'S CLEVER

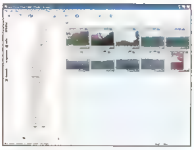
Merge two or more photos into one.



01 Read the manual (yep, 'fraid so) for tips on how to take photos for panoramas. Then power up *Photo Album 4* and hit Browse on the left.



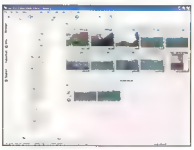
02 In the directory tree on the left, click the album that holds the images you want to turn into panoramas. The album displays on the right.



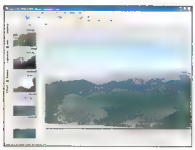
03 Hit the Panorama button in the overhead toolbar to launch the dedicated Panorama pane (currently empty) at the bottom-right of the screen.



04 Hit Settings then Perspective Projection for vertical scenes or Cylindrical Projection for landscapes. For the web, use Small as the output.



05 Drag the photos you want out of the album and into the Panorama pane. Stack them horizontally or vertically, and then hit Create.



06 When the panorama has been generated, it will probably have ragged edges. Hit Crop in the toolbar to remove them, then save the image.

OGG VORBIS

THE POLYPHONIC SPREE

30 MINUTES

On the rebound from a long affair with MP3, **Russell James** falls for a sweeter-sounding amour, Ogg Vorbis.

ON THE DISC

TIPS

>>PLAY IT AGAIN

NO GO With all these spectacular OGG files sitting invitingly on your hard drive, it would be a crime not to try some of them out. Attempt to fire them up in some of the big-name media players, however, and you'll be sorely disappointed.

PLAY AWAY Before you get all stroppy and ask us why you bothered converting, we have an alternative for you: install *Ashampoo Media Player* (**www.ashampoo.com**) from this month's coverdisc. This is a damn fine player, and is happy to play your OGGs in all their acoustic glory.

Love is a fickle thing indeed. Even the most passionate feelings can eventually wither and die like a flower caught in a last frost. Kylie dumped Jason, Frank fell out of love with Peggy, and last month, even the precious bond between our staff writer Dan and his moth-eaten teddy bear was broken when he found that he was, after all, attracted to girls.

We thought that we would love MP3 for ever. Lately, however, we have been forced to admit that a new audio apple has caught our eye. Now we want to start all over again with Ogg Vorbis – a new music compression format that delivers better quality sound than MP3 equivalents of the same file size. It will be difficult to cut loose from our old love, for sure, but we believe that we have found a way of doing it that relieves some of the pain. We have turned to audio conversion software.

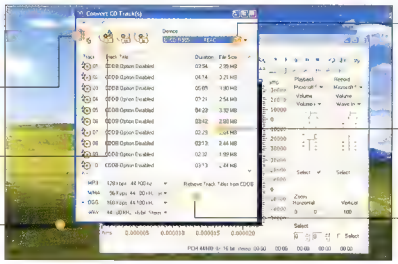
Quick conversion

Fortunately, there is a number of programs out there that enable you to switch your CD tracks directly into OGG for all the benefits outlined above. One of the best is Mystik Media's *AudioEdit Deluxe*, which can be bought for £26 from **www.webattack.com** we've put a demo on the disc for you. This simple conversion tool is exactly what we need.

Select **File➡Convert CD Tracks**, and the new window gives instant access to all the goodies at your disposal. You can choose your CD drive from the drop-down menu, and simply highlight any tracks you wish to convert. All this leaves is the selection of bitrate and frequency, which is largely a matter of personal preference. Basically, higher values for both of these attributes result

OGGY, OGGY, OGGY

Inside *AudioEdit Deluxe's* convertor.



CONVERSION BUTTON
Hit this baby to begin the journey to OGG.

TRACK CONTROLS
Play, pause and stop. It's the latest dance craze.

FORMAT SELECTION
Choose OGG, or this tutorial is just a waste of our time.

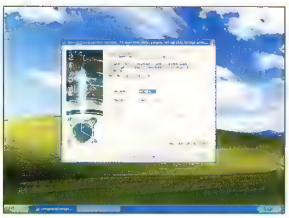
DEVICE MENU
Make sure you select the correct CD-RW drive, or nothing will happen.

TRACKLIST
Highlight the songs you want, and ignore those you don't.

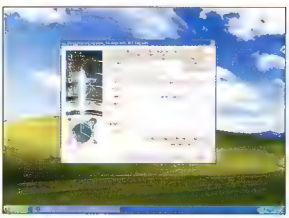
CDDB
You can subscribe to CDDB if you want online CD information.

>>TURNING A CD TRACK TO OGG

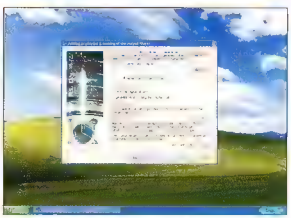
Working within *Audio Conversion Wizard*.



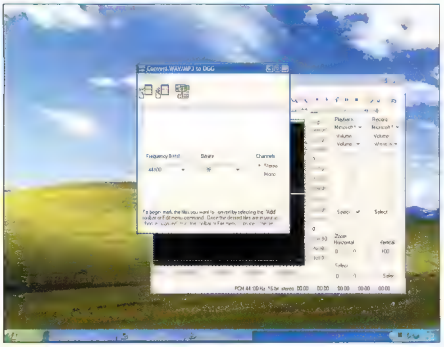
01 CONVERT ALERT Select the conversion file, and choose **OGG**. You're now confronted with this intimidating screen. If you are a beginner, start from a 44,100kHz sample rate, stereo and a quality value of six, and adjust later conversions as you see fit.



02 TRACK ATTACK As with MP3, it is possible to embed track information within an OGG file. *ACW* gives you the flexibility of either loading data from the source file, extracting it from the filename, or simply entering your own. If you're unsure, use the source info.



03 NAME GAME If you use playlist files, *ACW* enables you to add your finished OGGs to them. Usefully this screen also enables you to establish a naming convention for your files. Choose **Add Title** and all your OGGs are christened after the song they hold



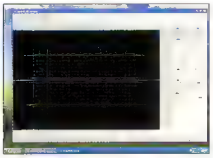
***AudioEdit Deluxe* also does MP3 to OGG conversions, but we reckon *Audio Conversion Wizard* does a better job of it. So there.**

in better quality conversion, but also increase the OGG file's size. We reckon a 44,100kHz frequency with a bitrate of 160kbps gives as good a sound as you should ever need.

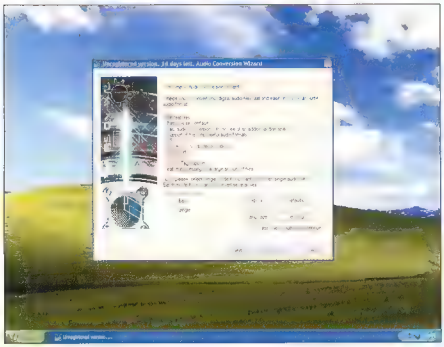
Let the music play

Having stored all your latest purchases in Ogg Vorbis format, you may wish to switch some older sounds over from MP3. We should point out that there is nothing to gain in terms of quality by doing this, because information has already been lost compressing the music into MP3. If you want a uniform style for your tunes, however, there are plenty of packages that help MP3s go Oggy. We recommend that you check out *Audio Conversion Wizard*, downloadable from **www.globalshareware.com** for £16. Again, we've put a demo on the coverdisc for you.

Audio Conversion Wizard enables you to deal with files either one at a time, or show off by converting a batch all in one go. The approach for each method is almost identical – obviously for batch processing you need to specify details for each song. As with *AudioEdit Deluxe*, the most important part is the selection of sample rate and bitrate, or, as *Audio Conversion Wizard* calls it, Quality. This scale of 0 to 10 represents rates between 64 and 400kbps – a value of six or seven is usually about right. **PCF**



If you like your face as it is, we don't recommend telling Mystik Media that *AudioEdit Deluxe* is just a convertor.



The initial *Audio Conversion Wizard* screen may look dull but it's pure magic.

↘ MS PLUS! PACK

PHOTO STORY

PART TWO

Make a multimedia extravaganza with the MS Plus! Pack.

Last month we told you how to use *Microsoft Plus! Digital Media Edition* to create a jukebox. This month, we're revealing how *Photo Story*, part of the same software, gives you the chance to make multimed a slide productions with very little effort. For more details about this *Plus! Pack*, browse to **www.microsoft.com/windows/plus/dme/dmehome.asp**. At the time of writing it's only available for download by US credit card holders, but it's widely available in the shops for £15.95.

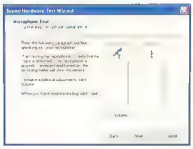
Just adding music and subtle pans and zooms to your pictures creates a professional look when you use *Photo Story*. It's the perfect five-minute job that can look as though you've spent hours. All you need is a folder of pictures, some background music and a story to tell. **PCF**

>>STORY TIME

Make a moving tale from words and pictures.



01 **Select Start ➔ All Programs ➔ Microsoft Plus! Digital Media Edition ➔ Photo Story. Ensure your mic is plugged into your soundcard and click Configure Microphone.**



02 **As you talk, you should see the sound level registering in the green area. Adjust the volume to keep it there. Click Next and do the same for the playback volume.**



03 **Press Begin a Story, followed by Import Pictures. Browse to the photos that you're after, highlight those you want and click Open.**



04 **Drag the photos in the filmstrip into order. Click Next and press Record to start your narration. Click the blue arrow to go to the next photo.**



05 **Choose Next to finish your narration. Enter a title and subheading for the title page and alter the length of time it's shown for. Add a background image.**



06 **Browse to a music track to play in the background. Click Next and choose Medium Quality for video and audio if you plan to email your work.**

SECURITY

FIREWALL WITH A PC

ON THE DISC

TIME TAKEN 90 MINUTES

PART ONE

Wary **Mike Williams** has a portcullis for his maisonette – now he wants a hardware firewall to keep his PC safe online, too.

TIPS & TRICKS

>>LINUX DRIVERS

STINGRAY If you connect to the Internet via the Alcatel Speed Touch USB ADSL modem (also known as the Stingray, or just the frog), it's best to download the latest Linux drivers from **www.speedtouchdsl.com/dvrreg_lx.htm**. When prompted, download the binary file, use a program such as *WinZip* to unpack it, and extract the mgmt.o file required by *SmoothWall*. See the *SmoothWall* site (**www.smoothwall.org**) for more details.

Staying safe online is important, but is installing a copy of *ZoneAlarm* really enough? Software firewalls are better than nothing, but they're short on features and often contain bugs. Some Trojans target them directly, bypassing or disabling whatever protection they offer.

The solution is to install a hardware firewall. Once connected to the Internet and your network, the firewall monitors all incoming and outgoing traffic. Sophisticated security options such as NAT (Network Address Translation) hide your network IP addresses from the outside world, and you get lots of other goodies thrown in (Internet connection sharing and a powerful proxy server to cache websites or log online activity).

And this industrial-strength protection need not be expensive. Install a copy of *SmoothWall* on that dusty old PC you've not used in years, and you'll have a powerful hardware firewall that might otherwise have cost you hundreds of pounds. We've put *SmoothWall* on the disc – you can find it via the interface of the CD, or in the **\freeware\smoothwall** directory of the DVD.

Of course, it's not quite that simple. The first hurdle is a psychological one, because *SmoothWall* is – gulp – a Linux app. No need to worry, though, because it's straightforward to set up. And once the program is running, you administer it via a browser on your regular PC, so no real Linux knowledge is required.

Check that your old hardware can cope with its new demands. A 486 PC with 16Mb RAM and a 200Mb hard drive is a sensible minimum, while a Pentium II with 64Mb RAM should be able to handle just about anything.

Getting online is the next potential obstacle. *SmoothWall* can handle most modem types (V.92 and earlier, USB, ISDN), but there's no support for Winmodems. And while you may be using a USB ADSL modem, does your old PC even have USB ports? If not, you may still be able to install a PCI card, but remember it needs Linux drivers.

If your PC is only a few years old, you have nothing to worry about. Get started by following our installation advice, and next month we'll talk about configuration options, along with how to troubleshoot and problems you might encounter **PCF**

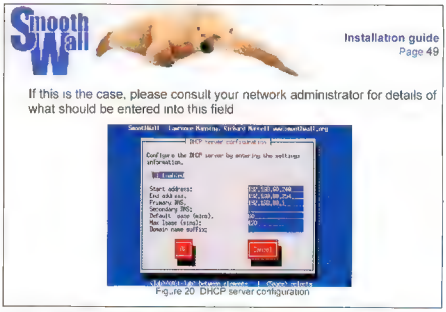
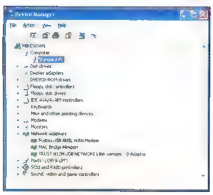


Figure 20 DHCP server configuration

Need more help? Don't miss the FAQ, User and Networking Guides we've provided on the coverdisc (in PDF format).



***SmoothWall* detects most network cards itself, but make a note of their details (type, IRQ) in case this fails.**

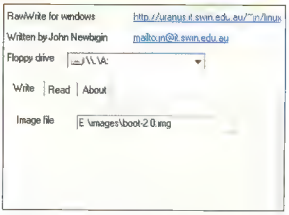
>>BUILD A BOOT CD There are several ways to install *SmoothWall*...



01 BURN, BABY, BURN *SmoothWall* is distributed via an ISO disk image, which we've provided on the coverdisc. Use a CD writer to burn this on to an installation disc, or use a program such as *WinImage* (**www.winimage.com**) to extract the files



02 PUT THE BOOT IN Use the BIOS setup program on the old PC to boot from CD-ROM, and you should then be able to launch the *SmoothWall* installation disc. But what if it can't boot from CD, or perhaps doesn't have a CD drive at all?



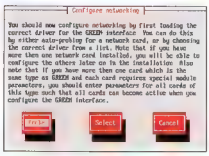
03 FLIP FLOPPY Run **\dosutils\rawwritewin.exe**, point it at **\images\boot-2.0.img** and click on **Write** to produce a boot floppy that can access a local CD. You can also install *SmoothWall* without any CD at all – see the User Guide for more

>>INSTALLATION ISSUES

Setting up *SmoothWall*.



01 DOS Experienced PC users will find the *SmoothWall* installation program very familiar It's straightforward even if you're not used to the DOS-like interface – use [Tab] to select an option, and [Space] to use it.



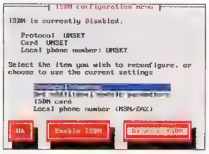
02 BACKUP The setup process partitions your disk, destroying any data it contains (so back up anything important first). Next, select the **Probe** option to locate the right drivers for the **GREEN** (local network) interface



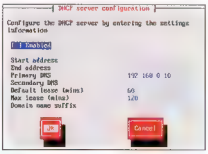
03 IP ADDRESS *SmoothWall* needs an IP address on your local network If you're not sure what it should be, check the TCP/IP properties on your other PCs For a new network, somewhere between 192168 01 and 192168 0.254 looks good



04 DETAILS Next up, select basic details such as keyboard type, time zone, and the host name for your firewall The default 'smoothwall' is fine for this last setting (unless, of course, there's already a PC called smoothwall on your network)



05 CONNECTION How are you connecting to the internet? *SmoothWall* asks for the ISDN, ADSL or regular modem options If you're not using one, disable it, otherwise configure the interface as you need (access phone number, for example)



06 NETWORKING Check the **Enabled** box, and you can run *SmoothWall* as a DHCP server which allocates IP addresses for your network. This is useful, but unless you're experienced in networking, we suggest leaving this turned off for now.



07 PASSWORD Enter a password for the three different user accounts *SmoothWall* provides – a root user has complete control, setup can change most settings, admin typically runs the system on a day to day basis



08 LOG ON Once the setup is completed, *SmoothWall* reboots the PC and then displays the splash screen You can log on and reconfigure everything at the command line – but more on that next month

CENTARSIA

PHOTO MOSAICS

Create stunning photo montages with little effort, using *Centarsia*.

ON THE DISC

Photo mosaics are everywhere. Ever since the film *The Truman Show* used the innovative technique for its posters, others have copied it relentlessly And now you can, too Making your own photo mosaic is dead easy, thanks to *Centarsia* on this month's disc

Centarsia is limited to 400 uses before you have to contact its authors. The price for an unrestricted version isn't high, though. All they ask is for you to send a postcard which includes an email address for them to send a serial number back to you. The snail mail address for the postcards is on the website at **www.alhena-design.com/centarsia/ contact.shtml**

The key to a good photo mosaic lies in your choice of the small pictures. In *Centarsia* terms, this is called a queue. As you make a queue, bear in mind the large image you want to use and choose pictures that reflect the range of colours in it. The more pictures in the queue, the better the final image will be When you're done, you can save the main image as a bitmap or a JPEG **PCF**



Can you tell what it is yet?

>>PATCHWORK PICTURE

Use your own photos to make up a bigger picture.



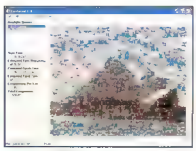
01 Install and launch *Centarsia*. Click Tools ⇒ Open Queue Manager. Press Create New Queue and use the sliders to change the size of the photos, then click OK.



02 Choose Select files to add to selected queue. Browse to the files you want to use in your photo mosaic and click OK. Press Add listed files to selected queue.



03 Once the queue is complete, click OK. Select File ⇒ Open master image, browse to the image you want and click Open. Adjust and crop the image if necessary.



04 Choose the queue you want to use and then select Commands ⇒ Run Mosaic. Watch your photo mosaic develop and save it as a bitmap or JPEG once complete.

WINDOWS SYSTEM TWEAKS

SMARTER WIN UPDATES

SKILL LEVEL

TIME TAKEN ONE HOUR

Every time you reinstall Windows 98, ME or XP, you have to download its updates again. Sod that, says a feisty **Nick Peers**.

TRICKS & TIPS

>>OFFICE UPDATES

SCAN FOR UPDATES If you're running Office 2000 or XP you can have your PC scanned for the latest available Office updates in a similar vein to Windows Update. To access this feature, log on to **http://office.microsoft.com** and click **Update your software** followed by the **Go** button under **Check for Office updates**.

MANUALLY PICK UPDATES If you're running an earlier version of Office want to download the updates to your hard drive, or want to look at converters and other tools, go to **http://office.microsoft.com/downloads/** instead.



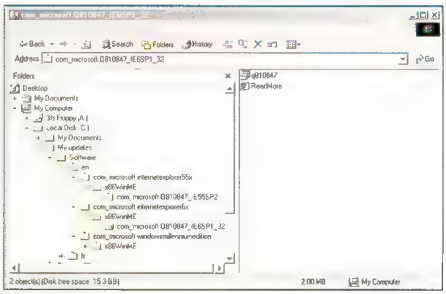
Each update has to be installed individually, but you can avoid restarting between each update until they're all installed.

Let's not be unchantable Windows updates are a way of life, and vital for the continued well-being of your PC. Yes, it chokes us to admit that Microsoft is probably right in making Windows amenable to updates, patches and fixes, but surely there could be a better way than having to endure long downloads each time you want an update, only to find yourself doing it all again when you're next forced to reinstall Windows from scratch?

Actually, there is, although Microsoft doesn't go out of its way to tell you about it. You can set up Windows Update to give you access to the Update Catalog, where you can download each update as an executable file to your hard drive. Yes, you have to install each individual update manually, but if you then store your updates in a safe location – preferably another hard drive or removable disk such as CD or Zip – when you next come to reinstall Windows, you won't have to waste hours downloading the same updates again.

Getting started

The three-step walkthrough below shows you how to gain access to the Windows Update Catalog, while the walkthrough opposite reveals how to use it to gain access to your updates. If you're stuck with a dialup modem, but you have a friend who has broadband (or if you want to be charitable to a friend or family member in return), it makes sense to download the updates via the broadband connection and then burn them to CD. Failing that, we recommend downloading each update individually – or at least limiting your download size to no more than 10Mb at a time. This prevents a dropped connection scuppering hours of patient work – why is it connections always drop 90 per cent of the way through a download anyway? Sadly, the Update Catalog doesn't remember which updates you've already downloaded when displaying its results, so be careful that you don't download something twice. If you're unsure, just click **View download history** under **Other Options** to review what's already been copied to your hard drive.



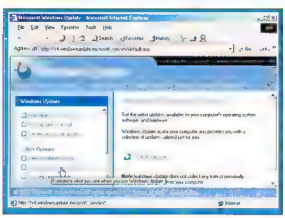
Updates are stored in their own folders, but they're not very logical – we suggest creating your own structure for your updates.

Another solution

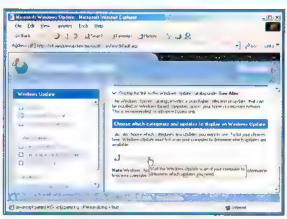
Once downloaded to your drive, you need to install each update individually. While it's probably best to restart your PC between each update when prompted, you can probably get away with installing

>>TWEAK WINDOWS UPDATE

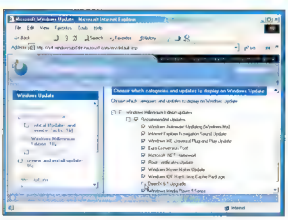
Make Windows Update display its catalogue, and more...



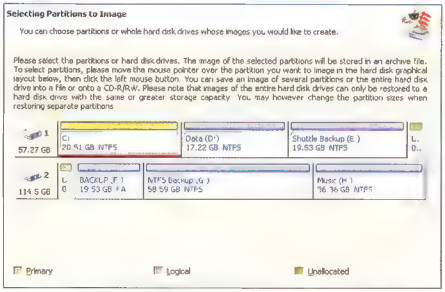
01 A DATE WITH UPDATE Run Windows Update via the **Start** menu, and when it loads, click **Yes** to any security dialogs to get the latest version of the Update software. Then click **Personalize Windows Update** under **Other Options**.



02 BOX CLEVER Start by ticking the box marked **Display the link to the Windows Update Catalog** under **See Also**. Now click **Scan for updates** to see what non-critical updates are available so you can decide whether to include them in the Update Catalog.



03 CATALOGUE MAN Once scanned, all recommended updates and drivers (if any) are displayed in the right-hand window – if you don't want them all to be available, untick their boxes to remove them from the Update Catalog. Click **Save Settings**.

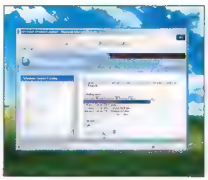


The alternative to downloading updates to your hard drive is to take an image of your hard drive after the updates have been installed.

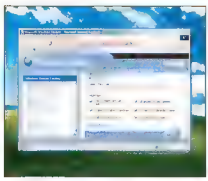
two or three updates before restarting. If all this sounds like too much hard work, and you have a drive imaging program such as *Norton Ghost* or *Acronis TrueImage*, there is another way. When you next install Windows from scratch, immediately download all available updates then take a snapshot of your system. When you next come to reinstall Windows, just restore your image instead – if you're clever, you could set up your key applications and create the perfect Windows snapshot so you'll be up and running with the minimum of fuss. **PCF**

THE UPS AND DOWNS

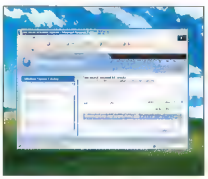
How to safely download available updates to your PC.



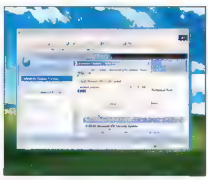
01 **SCAN** Open Windows Update and click **Windows Update Catalog** under **See Also**. Start by clicking **Find updates for Microsoft Windows operating systems**. Your first choice is to select your version of Windows and your language.



02 **FILTER** Click the **Advanced search options** link to filter your search by date, keywords or type of update (by default all of these are selected – we recommend leaving this as it is). Once done, click the **Search Now** button.



03 **SELECT** Now pick a category to search – all the results in that category are displayed. On a standard modem, download each update individually by clicking **Add** followed by **Go to Download Basket**; if you have broadband, add everything now.



04 **DOWNLOAD** Click the **Browse** button and select the folder on your hard drive to download updates to. Once done, click the **Download Now** button, followed by **Accept** to start the download. When complete, move on to the next download.

QUICK-STEP GUIDES

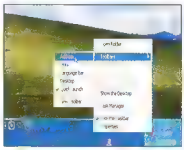
WINDOWS TIPS

Give your system a boost.

ON THE DISC

SHORTCUT TO THE WEB

Put the Address bar on the Taskbar for speedy web browsing.



01 **To put the Address bar on the Taskbar, right-click the taskbar and choose Toolbars ⇒ Address to put a tick by it. Position it on the Taskbar where you wish it to go (XP users may have to right-click the Taskbar and untick Lock the Taskbar first).**



02 **The main use of the Address bar is for typing URLs – just type in the web address you wish to visit, press [Enter] or click the Go button and your web browser automatically loads and goes to that site.**



03 **You can also use the Address bar in place of the Start ⇒ Run box – just type in the folder you'd like to browse or the system tool (such as msconfig) you'd like to launch from here. You'll never need the Start button again...**

A PRIVATE DISK DRIVE

Keep your files safe with *Dekart Private Disk Light*.



01 **Install *Dekart Private Disk Light* from the coverdisc and run the program. Click the Create button followed by Browse: choose a location to place your virtual drive or 'container', give it an innocent name (image.bmp, for example) that will help hide it and click Save.**



02 **Assign your container a drive letter (one not already in use), and pick a size for it. Click OK. Assign a password to it and click OK – the file is now created. Finally, format the drive like any other and you're ready to go.**



03 **A green light appears in the System tray and you can use the drive like any other from My Computer. To hide and protect the drive, open *Dekart* from the System tray and click Dismount. To open it again, click Mount and enter the password.**

Ask Luis...

Your questions answered



Quick quiz

Are you as clever as Luis?

Coughing college lecturer? Better leave now...

1 What feature of XP enables you to send data over the internet securely?
a) IPSec
b) VPN
c) Remote bridging

2 Which of these is not required to install Windows XP Pro?
a) CD-ROM
b) 2Gb disk space
c) VGA monitor

3 Which external service can not be linked to using the Microsoft Management Console?
a) HTTP
b) SMTP
c) FTP

4 What does a disk status of 'Foreign' mean in XP?
a) The disk is using an unrecognised filing system
b) The disk comes from a different PC
c) The disk is not on the hardware compatibility list

5 Which protocol is used primarily for Telnet?
a) PPP
b) RAS
c) SLIP

Answers on page 184

Free technical support

Got a problem with your PC? Write to Luis, or better still drop him an email. Assuming you can get your PC to work, that is.

pcfhelpline@futurenet.co.uk
PCF Helpline
30 Monmouth Street
Bath, BA1 2BW

Get help here!

Like a giant gull, **Luis Villazon** wades through your technical woes, stooping to pluck a wriggling morsel of succour from the slime.

Modems

Phantom fax

Q **The other day, my phone rang and before I could pick it up to answer, the fax machine cut in. Nothing strange about that, you might say – except that I don't have a fax. Never have. I know it's a fax machine because when I pick up the handset I can hear those beeps that fax machines make when they answer the phone, and it does it every time the phone rings. After a bit of experimentation, I have discovered that it only does this when the modem (an Olitec WaveMemory) is plugged in. This naturally leads me to dump the problem in your lap for a speedy diagnosis. So what's going on, then?**
Alex Pennington
arpennington@tesco.net

A Actually, you do have a fax machine and have had for as long as you have owned the WaveMemory because, like virtually every modem made in the last 10 years, yours is a fax modem. Normally you'd need to have the fax client installed and running on your PC before the modem would presume to answer incoming calls, but the WaveMemory has its own message queue and can run in stand-alone mode. Which, evidently, is what it is doing.

You might expect that the modem wouldn't enter stand-alone mode unless you specifically checked the appropriate box in Olitec's fax/answering machine software – and you'd be right. Except that it is possible for a mains spike to cause the modem to flip spontaneously. Not likely but, according to the good folk at Olitec, definitely possible. Install the software if you haven't already and clear that check box. All will be well until the next time you are struck by lightning.

Reader's Tip

Jon Skinner
info@jacarandatree.org.uk

To disable pop-up messages when you log in to XP, add a new **DWORD** value to **HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Windows**. Call it **NoPopUpsOnBoot** and set it to **1**.

"Install the software and clear the check box – all will be well until the next time you are struck by lightning"



Is it a modem? Is it a fax machine? It can be whatever you want it to be.

Drivers

Moving disks

Q **I'm planning to start my first new PC build soon and I was wondering whether I would have to reformat my hard disks or can I just plug them in to the new motherboard and carry on without having to reinstall everything?**
Ben Price
ben_price@btopenworld.com

A You might be able to get away with simply installing the old disks but at the very least, you'll need to install new drivers for sound, graphics, network, modem and so on. That wi l take you almost as long as reinstalling Windows and leave you with a messier system. When I build a new machine, I tend to start with a new drive and a clean install for drive C, and install the previous drive as a slave in the new system. This enables me to dual boot for a while during the handover process and eventually the old drive is just used for data.

If you are already using Windows XP on your old system, however, Windows Product Activation makes things a little trickier. With a retail, stand-alone licence, there shouldn't be any problem because the 30-day grace period for activation gives you enough time to complete the handover before you re-activate XP on the new system (which you have to do

>>5.1 SURROUND SOUND

How six boomboxes can surround you with sound.



DECODER
Takes a digital composite signal and separates it into six channels – five for the main speakers and a low frequency effects (LFE) channel for the subwoofer.

SUBWOOFER
The .1 refers to the fact that the subwoofer is fed by a channel sampled at a much lower 240Hz. This is actually 0.005 of the 48kHz sampling rate used on the other five channels but who's counting?

REAR SPEAKERS
Should be placed at the same distance as the front ones at an angle of 110° from the centre front speaker.

FRONT SPEAKERS
These should be placed in an arc so that all three speakers are the same distance from the listener. The angle between each side speaker and the centre one should be 30°.

BASS MANAGEMENT
Theoretically all the five main speakers should be full-range. Cheaper systems use smaller speakers and pass all the bass components of all the channels to the subwoofer as well as the specific low frequency effects.

MUSIC
Many music tracks are mixed to ignore the LFE completely. Others use it for some of the drum and bass. This can cause unpredictable results on 5.1 systems if the subwoofer volume is adjusted independently.

over the phone) Unfortunately, many pre-installed OEM licences are customised to tie them to a particular BIOS and simply refuse to install on a different motherboard If yours is like this, you need to buy a new copy of XP

PSUs

Power loss

Q My PC has started randomly turning off. This is not a crash or even a shutdown – everything just stops. The first time it did this it took the 300W PSU with it. This was returned for a warranty replacement but in the meantime I bought a new 250W ATX to get the PC up and running. The replacement PSU worked fine for 30 minutes, then the same turn-off happened. I disconnected everything not needed, such as steering wheel, printer, cable modem, hard drives, CD-ROMs, hub and so on, and it ran for two hours before turning off. This morning it didn't even complete a boot-up before turning-off.

I have run the Gigabyte motherboard GWUM.EXE routine and the voltages and temperatures are fine (the AMD XP2000+ is at 40°C). A quick 'back of the finger' temperature test on the PSU, CPU, GFX card and so on show no temperature abnormalities.

Maz Evans
masten.evans@ntlworld.com

"If a 150W supply doesn't work you could try a potato with two electrodes stuck in it"

A So you blew a 300W supply and your response was to replace it with a lower rated unit. Good thinking. Why not try a 150W supply next and if that doesn't work you could drop all the way down to a potato with two electrodes stuck in it.

Or you could go with AMD's recommendation, which is to use a 350W PSU for all the newer CPUs. And for the purposes of this discussion, the XP2000+ processor definitely counts as new.

Printers

Driver loading

Q When I try to print anything I get message: "Setup cannot load installer (epusbci.dll) for Epson USB printer hardware being installed. Contact your hardware vendor for assistance."

Have emailed Epson... Sadly no reply! Have tried re-installing software for printer via CD supplied with printer (Epson Stylus colour 760) but still getting above message.

Mike
mike.247@ntlworld.com

A Never seen this personally. But have heard that driver files on CD are named DL_ instead of DLL. Installation prog looks for **epusbci.dll** and fails because all it finds is **epusbci.dl**. Solution is to copy file to hard disk and rename it, then point installer to this location. Possible to go back to using pronouns again, now?

FAQ



P-Ink

Pink?
No P-Ink. It's short for Photonic Ink, which is in turn short for 'ink that can change colour electronically.'

Groovy man, what is it made of?
Electronic inks have been around for a few years but they can only change between two colours – usually black and white. P-Ink uses tiny spheres of silicon dioxide packed in a layer. At 300nm across, the spheres are small enough to diffract visible light to create an iridescent, multicoloured effect.

So how does it change?
By packing the spheres with a polymer gel, the spacing between them can be adjusted to tune the diffraction for a particular colour. The gel is conductive and the more voltage applied, the more it swells. This alters the space and the colour.

Does this mean I only need one cartridge for my printer?
It's bigger than that. The colour can be changed after the document is printed. Newspapers could show animated pictures or scrolling text. Computer displays could be printed on to almost any surface, clothing could have user-selectable colours.

But it's all in the lab still, right?
Absolutely. This will never make it into a consumer product.

Really?
Just kidding. The commercial applications for this are so many and varied that there is a huge push to develop actual products. Better still, the manufacturing process is actually quite cheap. The nanosphere layers will self-organise as the silicon dioxide precipitates out of solution, and by avoiding the need for separate red, green and blue pixels, many of the display addressing problems disappear.

Won't it just be snapped up by the military?
Chameleon suits and rugged portable displays are indeed tempting prizes but plenty of military technologies find their way into civilian markets eventually.

Such as?
Er... Home Patriot missile systems?

LG

Digitally yours

Why buy anything else?

AWARDS 2002 WINNER
PERSONAL COMPUTER WORLD

LG's FLATRON LCD Monitors were voted best monitor of 2002 by PCW and PC Pro Magazines, so why buy anything else?

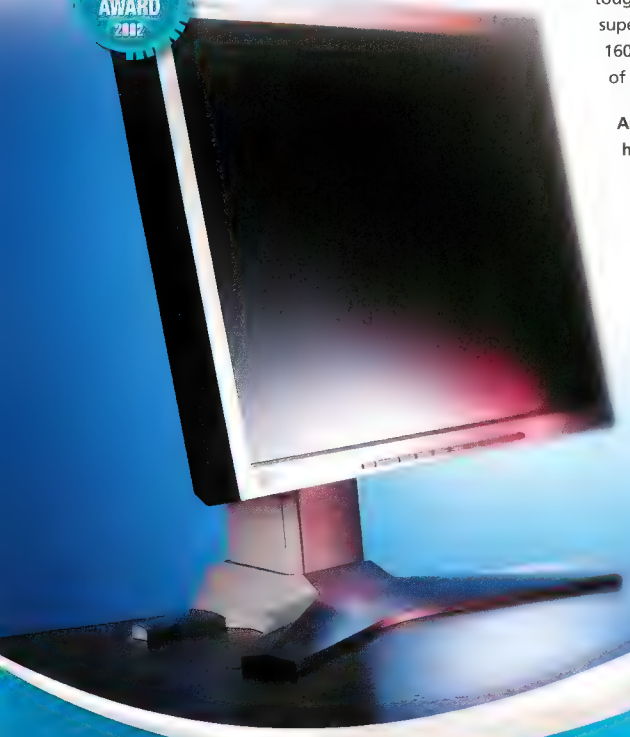
The L1800P, with one of the narrowest bezels, enhances work space and, in a tiled format, creates an almost unbroken picture. Its integrated power supply makes it perfect for wall mounting.

PC PRO LCD MONITOR AWARD 2002

But it takes more than that to impress the world's toughest judges. The L1800P combines superb brightness with 90° screen rotation, 160° viewing angle and the ergonomic benefits of full tilt and swivel.

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FLATRON LCD

Security

Browse alert

Q Sometimes my personal firewall (comes with *PC-cillin Anti-Virus*) picks up something called NetBIOS browsing. Is someone trying to hack me? Or is it nothing to worry about?

Lewis Coomber
lewiscoomber@hotmail.com

A NetBIOS browsing is the service used on your LAN to see which computers are in your network neighbourhood. Firewalls block this port (139) because it can be used by hackers to learn the details of your PC's network settings and thereby gain access. So yes, it is a hacking attempt but it is almost certainly a completely automated rattle of the door handle to check if the door is unlocked. Your firewall is cheerfully shrugging this aside and unless it happens a lot and you want to pore over the log files to begin tracing the perpetrator, you need do nothing further.

Reader's Tip

Jason Neil
kf_neil@bocaratonsoft.com

Enable *Norton Internet Security's* and *Norton Firewall's* desktop bar: **Start ⇒ Run**, type `C:\Program Files\Norton System Works\Norton Internet Security\Iamapp.exe appbar` when the firewall is running.

Security

Child protection

Q I've just read a piece in *PCF* 143 (page 178) about keeping your meddling kids from altering your files and XP settings.

I am using XP Home edition which came pre-installed on my PC and I have the NTFS file system, but I don't have the **Use simple file sharing (recommended)** option in the **Advanced settings** section on the **View** tab of **Folder options**, so I can't clear its check box.

Simon Hague
thehagues@aol.com

A XP Home only uses Simple File Sharing, so you can't switch to the more flexible 'classic' style of sharing. You can leave a folder unshared but that will only keep your kids out if they are trying to access it over the LAN. At your desk, they'll be able to meddle to their hearts' content. You could always put a password on your screensaver, though. If you do decide to upgrade to XP Pro, Alex Walker coincidentally emailed me this month with his take on the process of setting up classic sharing. See the box below.



Kids should be seen, not heard, and kept away from your PC.

Viruses

Hidden messages

Q I've started receiving returned mail from people I have not emailed, most of it with attachments of either .pif files or small .jpg files and some with .txt files attached. These attachments can not be opened, *Outlook Express* greys them out. I also notice that when I send an email, the dialog box says "sending one of two messages" even though I am sending only one. My **Sent Items** box shows only the mail I was trying to send, not the mysterious second message.

I'm convinced I have a virus. I log on to Trend Micro HouseCall and do a full scan there but it's all clear. In my Windows temp folder I found a whole herd of vCard files (.vcf), a strange .txt file called TmuDump.txt (attached) and a setup.exe file, which I thought I shouldn't attach.

Sean Waller
sean@pafuri.co.za

A The vCard files are just address book entries formatted to be sent as email attachments. Nothing necessarily sinister there, and the text file which you helpfully attached is simply the log file of your sweep from Trend Micro. But I agree that you almost certainly have a virus. The question is, which one? Instead of attaching random bits of junk from your temp folder, why don't you just send me (or Symantec or McAfee) one of these bounced emails with the executable attachments? That should narrow down the search pretty quickly.

Surfing

Slow screen

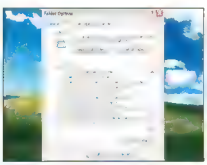
Q When I download or read anything with 'fancy' graphics, which these days is everything, my screen is slow and occasionally fragmented. Will a graphics card (which I haven't got) speed things up a lot? Or is this just for games players?

James Harrison
jjharrison@dt118nq.fsnet.co.uk

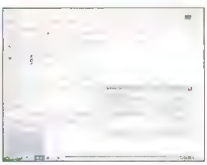
A Well, obviously you do have a graphics chip of some sort otherwise your screen wouldn't be slow and fragmented so much as totally blank. Whether you have a five-year-old SiS chipset surface mounted on your motherboard or a GeForceFX installed in your AGP slot isn't going to make very much difference to you, because I think "download or read" is your quaint way of telling me that you are

>>UNDER LOCK AND KEY

Alex Walker (**alex_walker@lycos.co.uk**) shows how to keep family members off your files in XP Pro. Thanks Alex!



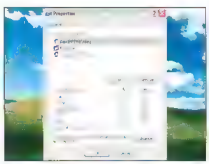
01 You need an **NTFS drive**, because it offers access features which **FAT32** does not. In Explorer, go to **Tools ⇒ Folder Options ⇒ View** and scroll to **Use Simple File Sharing (Recommended)**. Make sure it is unticked. Check that **Show hidden files and folders** is enabled.



02 Open **\System32\GroupPolicy**, and select **gpt.ini**. Go to **Properties ⇒ Security**, click on the user **Everyone** (or click **Add**). Make sure that **Read** and **Read & Execute** are selected from the **Allow** column, if not disabled. Click **Apply** but do not close this window.



03 Go to **Start ⇒ Run** and type `mmc`. Press **[Ctrl]+[M]**, then click **Add**, choose **Group Policy**, then **Add**. If you get "Access denied", you've set yourself up to **Deny** in step 2. This is the Group Policy editor, which has many security options. Save and close the console.



04 The security settings you set have been applied to you – don't panic. **[Alt]+[Tab]** back to the window we saw in step 2, and set **Read** and **Read & Execute** to **Deny** for all users who will not be secured. Set yourself back to **Allow** to change security in the future.

browsing the web. And I think "fancy graphics" is Harrison-speak for Shockwave and Flash animations. Or maybe you are just talking about static, graphics-heavy pages. I'm suddenly not so sure.

Broadband, if it is available in your area, might be the answer, but your letter is such an unreconstructed piece of doe-eyed technical innocence, it is entirely possible that you are still using a 28.8K modem on a P60 running Win 95. And if that's the case, you most certainly do need a new graphics card. Along with a new CPU, hard disk, RAM, modem.

Motherboards

Woolly jumpers

Q **I have successfully built a working PC which is running great but the processor came with no manual, so I did not know the FSB speed or the voltage. When I booted it up for the first time I used the jumper-free mode of my motherboard, whereby everything is done by the BIOS. Now that it is working fine and I know what the FSB and voltage should be, should I switch to using jumper mode? Someone told me that doing it through the BIOS affects the performance of the PC.**

Dean Athow
shizbazki@hotmail.com

A You may tell that person from me that he is an idiot. The first time you boot the PC in jumperless mode, the BIOS might take a second longer to run the POST as it queries the CPU for the correct settings. After that, the values are saved to the CMOS memory and read from there on all subsequent boots. The jumpered mode is only there as an override, in case the autodetect routine makes a mistake or you accidentally overclock it through software to the point where it won't boot at all.

Graphics cards

AGP override

Q **I have an MSI K7N420 Pro nForce motherboard (with integrated GeForce2, but you probably know that already!) which also has a USB 2.0 expansion card stuck in a PCI slot. I recently bought an Inno GeForce4 MX440 but when I put it in the AGP slot, the system defaults to the onboard GeForce2. If I take the USB 2.0 card out, the system goes for the GeForce4. The BIOS was flashed about three months ago and is Award v1.6. The two Init display options are PCI or AGP/ONBOARD. Nothing saying AGP only.**

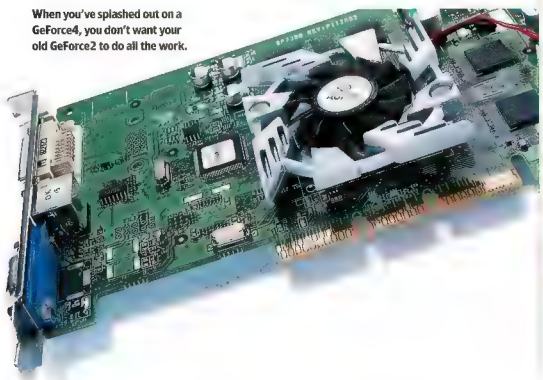
Dave Skinner
skinnell@btinternet.com

A This may be because the chipset drivers for the motherboard need updating. Some of the MSI nForce boards need BIOS updates before the external AGP slot is recognised at all. The USB 2.0 card is probably tying up an IRQ that is preventing the GF4 from initialising properly but this shouldn't be an issue if the AGP port is correctly configured.

Drivers

Radeon lockups

Q **I initially had an SiS P4s8x motherboard and it wouldn't run 3D apps. I tried five different Radeon 9700 cards, to no avail. So then I plumped for the P4G8x, which initially ran fine. This**



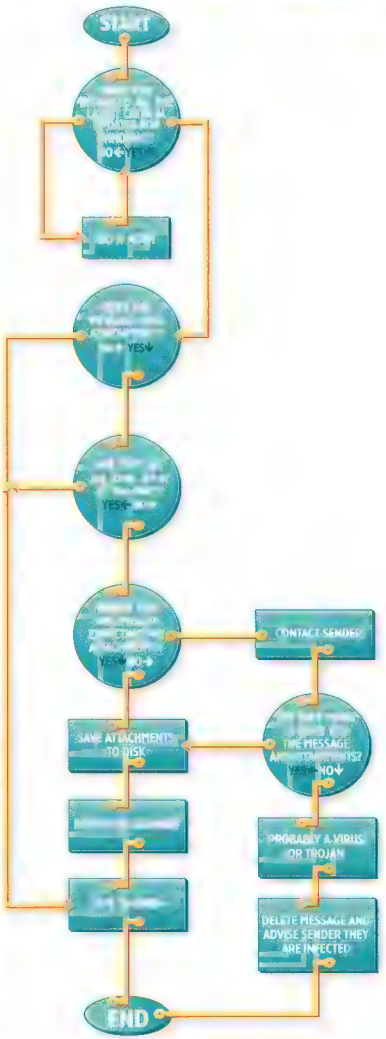
When you've splashed out on a GeForce4, you don't want your old GeForce2 to do all the work.

THE CHARTS

Virus scanning

Q How can I tell if an email message contains a virus?

Alison Cheaton
skippykit@fsnet.co.uk



lasted about four days then the crashes started and became more and more frequent. I took my PC to the shop and they tried swapping everything except the Radeon, even trying a 550W PSU but it still crashed. Eventually they found bad sectors on my hard disk, replaced that and reinstalled Windows.

After a couple of days, the crashes started again. Every time it reboots, Windows error messages tell me it's my GFX card or drivers but, don't forget, on the last mobo I tried different makes of Radeon and they all played up the same.

Bill (silly Billy) Croughan
william@croughan.fsworld.co.uk

A Different makes but all 9700 cards, I surmise, and all running the 3.1 Catalyst drivers. There is a problem with these drivers on the P4G8x chipset. ATI is working on a fix, which will presumably be incorporated into version 3.2 but until then the work around is to uninstall the Catalyst control panel. This hurts performance slightly but should improve stability.

Keyboards

Key comeback

Q I believe that [SysRq] (System Request) was inherited from standard IBM keyboard layouts that predated the original IBM PC and are still in use with machines such as AS/400s and mainframes. One legitimate use therefore for [SysRq] on a PC would be when you are using emulation software to connect to these machines. [SysRq] could be mapped to the SysRq function during the emulation session to switch sessions, look at the job you are in and stuff like that.

John Culverhouse
john.culverhouse.jc1@bayer.co.uk

A That's a lovely bit of history but explain to me why the six people in the world who would actually want to do this couldn't just use [F12]?



Who cares what [SysRq] is for when you have so many other lovely keys to play with?

OS upgrades

Finding Win 98

Q How can I update my old useless system from Windows 95 to Windows 98?

Amy Cipriano
galaxygirl20@hotmail.com

A This may look like an incredibly stupid question but installing Win 98 is actually one of the few worthwhile upgrades for an ancient PC. Win 98 places very little extra strain on the system but significantly improves stability and makes networking and hardware detection much simpler. It's no substitute for chucking it in the bin and buying an entry-level XP machine, of course, but it may just stall the Reaper on the doorstep, while you hide the PC behind the sofa.

Naturally, you can't still buy retail Win 98 licences – any more than you can buy quill pens or tricorn hats. But eBay usually has about five copies up for sale at any one time and you should be able to pick one up for around £40.

Installing Windows

Damaged Registry

Q The other day I was removing some unnecessary applications that start up with Windows, through the Registry, and I think I may have deleted some stuff I shouldn't have. Now whenever I boot my computer, I get three error messages complaining about ThunkConnect32, NvCpl.dll and cmd32.exe.

I am running Windows XP Professional so I decided to run the System Restore tool, but after I rebooted it told me that my system could not be restored to that point. I tried another date but to no avail.

Muhammad
fayaadh@mail.com

"Deleting random Registry entries to uninstall applications is like cleaning your teeth with a shotgun"

A Deleting random Registry entries to uninstall applications is like cleaning your teeth with a shotgun. It sounds as if you have done way too much damage for System Restore to bail you out, so you will have to perform a repair reinstallation of Windows XP. Insert the setup CD but at the Welcome screen do *not* select the option to repair using the Recovery Console (you are too far gone for that). Instead, press [Enter] to start the install and when the setup process locates your existing Windows installation, select it and press [R] to begin the repair. This overwrites system files but should leave data and settings alone. The ThunkConnect32 and NvCpl.dll errors relate to your GeForce card, so you'll

Reader's Tip

Mike Cross
cross228@aol.com

To speed up Explorer on a LAN, click **View ➡ Details**. Right-click on the column headers and uncheck **Owner**. Click **Tools ➡ Folder Options ➡ View ➡ Apply to All Folders** to make this permanent.



FATAL EXCEPTION ERROR

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Wow – a freephone number for tech support! It sounds too good to be true. And it is, because the woman on the helpdesk clearly didn't know an electron gun from a hole in the ground. She incorrectly attributed a problem to the monitor when the symptoms were more consistent with a graphics card fault and had no real idea of which tests to perform or questions to ask to narrow down the cause. This isn't tech support, it's just a friendly receptionist, though she was able to supply the phone number for the ViewSonic authorised repair company.

Solved problem No
Courtesy ★★★★
Efficiency ★★★★
Tech knowledge ★
Overall ★★

Ask Luis... Q&A
Your questions answered



GTA3: known to cause noises in Thurston's PC and the tabloids.

also have to reinstall the Detonator drivers (**www.nvidia.com**)

OS tweaks

No resizing

Q When I right-click a JPEG file in Windows XP and select Send To ➡ Mail recipient, I get a dialog box that asks if I want to keep the original picture size or make the picture smaller. Is there a way of making a standard setting for sending emails so I'm not asked each time? I send a lot of artwork proofs via email, so keeping the original size is quite important.
Neil Manson
neil@designer-print.com

A The picture resizing wizard is only triggered from **Send To** or the **Email this file** option in the **File and Folder** tasks on the left of the Explorer window, so if you simply drag the files into *Outlook Express*, they are attached to a new message in their original sizes. This method is easy, obvious and foolproof, but if you're prepared to sacrifice system stability for the sake of accommodating your ignorant hidebound dependency on **Send To**, there is another way. So far as I know, no Registry hack will let you turn the wizard off but some impetuous fool with more spare time than good judgement has hacked Sendmail dll to produce a wizard-free version. It is available from **http://members.aol.com/axcel216/xp1.htm** but for pity's sake don't do it. You have no way of knowing what bugs or trapdoors have been put there and sendmail is much too powerful a DLL to trust to someone else.

Reader's Tip

Muhai AlMasouf
muhai911@blueyonder.co.uk

To fix crashes in XP with nVIDIA cards, go to **Display Properties ➡ Advanced ➡ Troubleshoot** and uncheck **Enable write combining**. Then add a **DWORD** value called **LargePageMinimum** at **HKLM ➡ System ➡ CurrentControlSet ➡ Control ➡ Session Manager ➡ Memory Management**. Set it to FFFFFFFF hexadecimal

"The only component that is expected to make the ultimate sacrifice is the surge protector"

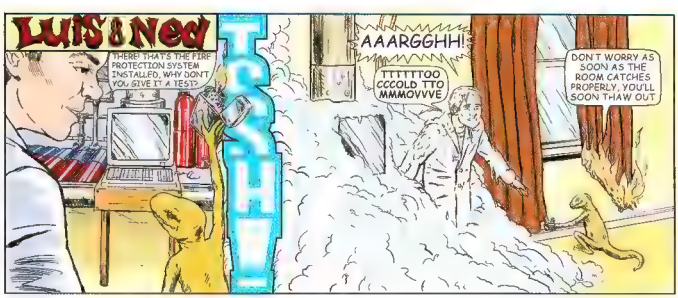
PSUs

System meltdown

Q I was playing *GTA3* when I heard the worst sound. I would describe it as the sound you hear just after the timer of a nuke reaches 00:00. Yes, something had blown. I returned it to the shop and was informed that every component except the graphics card had gone up in a puff of smoke. This was allegedly due to a power surge. Shouldn't the power supply or motherboard have taken one for the team to save the rest of the boys?
Thurston
mental_playg@yahoo.com

A The only component that is expected to make the ultimate sacrifice is the surge protector and it doesn't sound like you had one of those. The fuse in the PSU can't be relied on to blow fast enough to save the rest of the PC from a big enough surge.

That said, I have never heard of an entire PC blowing. Did the disks go too? Even the floppy drive? A power surge that big ought to have taken out all the electrics in your house, too, and in fact most of the street. If it didn't, it may be that the surge was generated internally to your PC by a short in the PSU. **PCF**



Words Luis Villazon Pictures Mark Mitchell

PCF FORUM CUTTINGS



Visit the forum (http://forum.pcformat.co.uk) for technical tips.

I have been really intrigued over the last couple of weeks regarding the 'conversion' of a 128Mb Radeon 9500 standard into a 9700. Has anyone done this? I know doing this invalidates the warranty and can b'gger up the card but you do save over £100 if it's successful. I was about to purchase a Radeon 9500 Pro – but I'll get the cheaper non-Pro if this can be done easily.
cmberry20

I don't expect many people to rush and buy graphics cards so that they can take bits off and put them back in different places just yet. It also involves changing the graphics card's BIOS somehow and I'm not sure how. I say this but there's probably a ton of nerds doing it right now! If I had a ton of money and didn't mind investing in crazy schemes here and there, maybe I would give it a go. But it's not likely
IForgot

And ATI has changed the PCB so you can't do it any more. If you get an old one you're lucky. You can't do it with the new one apparently
matrixck1

You'll be extremely lucky to find one on the proper PCB now. Once the hack became public, stocks dried up in no time. All current R9500 have their own PCB now. Early ones shared the same PCB as the 9700
AMacdonald

Yes, I've heard that the 9500 has a new PCB – the old one had the memory chips in an 'L' configuration: two along the side and two across the back (same as the 9700). New ones have the chips in a row. But does the hardware hack still work on the new PCB? That being the removal of a resistor and re-soldering it in another position.
cmberry20

No. It doesn't work with the new PCB
Flibberdy

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DDR RAM	256MB	512MB	512MB	512MB
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>>Reply all

Letters/Mail Feedback

Game price poser

Dear *PCF*, I don't know if you have covered this question before, but why is there quite a price difference in game titles of the same name for, say, the PS2 and PC? Some PC games can be up to £15 cheaper than their equivalent on PS2 or the Xbox. Why is this, are PC games cheaper to produce? I've just purchased *Splinter Cell* for the PS2 only to find it was £20 cheaper for the PC version!

Steve
baddog50@blueyonder.co.uk

Because console gamers are floons (yourself excluded, of course). The publishers say it's because they have to pay a licence fee to the console manufacturers in order to sell a game for their console. We say it's because PC gamers are harder to rip off than console gamers, having better taste, being more intelligent and being better looking.



Contrary game prices make Sam hit the roof.





New updates for a five year old game? Apparently so, though you won't be able to download any of them quite yet. Look on our DVD instead!

Card tricks

Dear *PCF*, In the March issue, your Star Letter winner described how to mod a non-Pro Radeon 9500. Well, I came across this little beauty which opens up the 8x pipeline – no soldering or modding, just software: www.max downloads.com/~ian/wizzard/. Also, for all graphics card drivers, I have found this site to contain some great, stable drivers: www.omegacorner .com. They seem to get around a lot of the more prominent issues.
Aaron Crowl
roberttasharoncath@btinternet.com

Thanks, but we actually covered this in some depth in April's *PCF* Hardcore. Whatever, readers should proceed with caution when it comes to any non-official hacks or driver downloads. Don't go crying to ATI (or us) if your new card dies screaming in the flames.

Heavy download

Dear *PCF*, I have *Half-Life* and like playing it very much, but the suggestions that it relieves stress are bobbins. For almost three months now I have been trying to download the latest update. Finding it is sheer hell, and it's 80Mb so won't download in under two hours. Please could you include the latest update on your disk next issue? I hope Sierra has a damn good explanation!
Mr Hyde
fnord_y2k@yahoo.co.uk

Wake up, it's been on the DVD since issue 148, as part of our patch library.

Barmy army?

Dear *PCF*, I am a serving member of the Army, currently stationed in The Netherlands. In my spare time I build, upgrade and repair PCs for colleagues. Recently I started looking around the online vendors recommended to me by friends in the UK. Yet most online ordering systems do not accept the BFPO format (mine is BFPO 28) as a valid postcode. Normally I am required to provide a postcode for registering on the site and again to confirm my card details. Having served overseas for most of my career, my credit card is always registered to my military address so that I can get my statements delivered. I can't use my civilian postcode as it is Dutch and doesn't fit the format the sites require to register. I have tried to contact three very prominent retailers and received little feedback or no reply and it leaves me wondering if HM Forces are recognised at all by retailers in the UK. Any suggestions as to what I should do?
indigo_prime
aka Sergeant Tony Kitchen

fwd>>fwd>>



Warballs special! Alec Meer laughs at tragedy fourfold.



<1> The real reason for the liberation? Or just an inevitable consequence of Western victory in Baghdad? A scarily prophetic image either way.



<2> Meanwhile, in a parallel universe... Just look at their happy little faces. The way it could have gone down, if only we could all just get along.



<3> At the time of writing, Saddam's final fate looks as though it may never be known. This missive from the distant future offers a valuable hint. Daddy, where did you hide during the war?



<4> Yes, we all saw the statue fall, and we all cheered. But what if not everyone was so happy about it? Suffer the little children, for they are our future.

>>SNIP >>SNIP

If it can't be said short, it ain't worth a second thought..

Which 3D card?

Dear *PCF*, I've got £360 burning a hole in my pocket which I would like to offload on to one of the new breed of graphics cards. Which one should I get: GeForce FX Ultra or the Radeon 9800? I have a little bit of knowledge of the specs, but can't make my mind up. It looks like people are starting to favour the Radeon 9800 over the GeForce...
Stuart Johnson
studio@elanprinting.co.uk

That's the critical consensus, though don't write off nVIDIA just yet (see news). If you want a quiet card that doesn't take up much space, though, the Radeon's a good choice.

Starter's orders

Dear *PCF*, I've just tried your article on page 144 on how to change the Start menu. You did not mention in the article that this would only work if you were using the Windows XP style, not the classic style. This is not a problem for me, but thought you would like to know of this problem.
Taz
owain.williams@zetnet.co.uk

Domo arigato goza masu.

Head boys

Dear *PCF*, Very eye-catching, the new look. On page 33 the pictures of all the *PCF* team have half their heads lobbed off. Does this represent the collective frontal lobotomies you all have had or a myopic photographer?
Mark S
Email address supplied

Geoff's insistence that the team all get hard new haircuts ended in carnage. Now we have to keep our heads perfectly level in order to prevent brain spillage.

WE ALSO HEARD FROM...

Daniel Morris – no, you keep buying *PCF*! **Louis LeCourbousier** – see our TV tuner card test in *PCF* 148. **John Greenhill** – any recent GeForce or Radeon card would do. **Andy Spiller** – self build can be cheaper, but we'll be looking at this soon. **Graham Coulson** – don't worry, you can get lots of cheap flash memory cards online, try Crucial.com.

Re: How to... Q&A

I hate Luis (again)

STAR LETTER

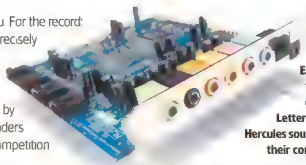
Dear *PCF*, I was debating whether to send this letter or not simply because I dislike Luis' attitude. A lot of people send letters to him asking for important help which could save this helpless writer hundreds of pounds in computer equipment. Luis, however, takes most of these letters and rubs them into the ground because he is supposedly more intellectually intelligent [sic] than us mere mortals. This is not too bad, but when Luis replies to these letters with comedy which sounds like it has been scripted by the same comedian who scripts Ant and Dec, why, it makes me want to give Luis another hole to breathe out of.

Lastly, in *PCF* 147, the answer to number two of 'The 100 greatest questions ever' is wrong. I have used [Alt]+[Sys Rq] for years – on every PC I have ever used it has taken a screenshot of the current window. I thought it may be another one of his sarcastic jokes trying to catch us complainers out. I'll have my eye on you Luis, so don't try anything! Oh, and by the way, is it just me, or does everyone think that Luis looks German?
Josh of Newcastle
jaygosh@hotmail.com



His Anglo-Spanish cover blown by reader Josh, Wolfgang von Villazon reveals his uniquely Teutonic sense of style.

Watch it Josh, he'll drive up there to do a *Get Carter* on you. For the record: Luis knows his stuff and always gets a response, which is precisely why successive editors keep tossing him a crust (it's *PCF* or the street for Luis, ever since his grandiose scheme to bring sushi and pole-dancing to Ilfracombe crashed and burned..) Would you prefer our Q&A section was penned by some beard in an Asda shirt, or a pierced lout who the readers barely notice? Anyway, these guys are all writing for the competition.



Each month the author of the Star Letter receives a Hercules soundcard for their contribution.

Every supplier has different policies, but here's what Time says: To ship PCs to British Forces postcodes we need to have a special agreement in place with the Post Office. Several years ago we had such an agreement but unfortunately several pieces of equipment went missing and therefore we decided to review this process. Time is happy to send equipment to members of the armed forces as long as they can supply a private address. It's a difficult situation but it is in both the consumers' and our interests that we have this policy. Nobody wants their new PC to be lost when they've just spent all their hard-earned cash.



Any excuse for a daft shot of Mac-loving turncoat Ian Harris (ex *PCF* features ed).

Re: Powerbook ads

One bad Apple

Dear *PCF*, This month I was scanning through my new *PCF*, and was horrified! No, it wasn't swearing, nor porn, but an Apple advert. No offense guys, but why the hell put a Powerbook ad in a mag that makes no secret of disliking Macs? I knew there were gonna be changes but that's just appaling. Other than that the new look is great – keep up the good work!
Niall Jackson
niall.jackson6@tiscali.co.uk

Apple's trying hard to convert PC users, and its money's as good as anyone else's, so we're not going to censor these ads. It's up to readers to decide. We're not anti-Mac – like most PC magazines, *PCF* is designed on one – we just love winding up sad-sack Apple evangelists. Apple's often its own worst enemy anyway. It capriciously charges for previously free services, seems to charge over the odds for simple hardware upgrades, and expects customers to download endless OS fixes, sorry, upgrades.

DROP US A LINE!

We love getting your letters – we really do. This month we're turning them into paper planes, which we then use to bombard the nepotistic council jobsworths next door with obscene airmail messages...
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Back in the day

Ed Ricketts takes his Tardis back 10 years to *PCF* 22



IN THE NEWS

Music, we suddenly [illegible] was the latest growth market on the PC, various bods switched from their Atari STs and developers ported their software. The war also arrived [illegible]

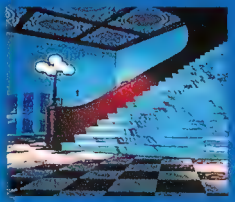
REVIEW OF THE MONTH

A utility called *QEMM-386*, which [illegible] memory manager for DOS. Y'see, you had 640K free memory back then, and even with drivers loaded [illegible]

"You took control of troops to kill someone called Saddam Hussein"

GAME OF THE MONTH

Virgin's The *7th Guest* finally [illegible] two of us spent three full days playing the damn thing. Despite costing 70 quid and needing a CD drive, it garnered 75% [illegible] of town. Anyone [illegible]



BACK IN THE REAL WORLD

Also featured this issue was a game [illegible] Empire called *War in the Gulf*, which saw [illegible] taking charge of troops as they invaded [illegible] in order to kill someone call Saddam [illegible]

Next month: on sale 19 June

THE 150TH ISSUE!

PCFormat has reached another milestone. In between tickertape parades and getting all emotional, we'll be bringing you lots of surprises.

PLUS! FREE GAME HARDWOOD SOLITAIRE ON THE DISC

HAPPY BIRTHDAY TO US

For something that's 150, *PCF*'s very sprightly. Just some of the highlights...



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pcfmail@futurenet.co.uk

SMART PICTURE COMPOSITION

Avoid tedious snaps with this photographic originality meter for your digital camera.

As you stand in front of the Taj Mahal or the Golden Gate Bridge or the guards at Buckingham Palace, with your finger teasing the shutter release, has it ever occurred to you to wonder how many other people in the history of photography have squinted through their viewfinder at exactly the same scene? Is your contribution really going to add anything to the sum of human knowledge? Probably not, but wait! *PCF*'s latest invention guarantees that you never need worry again. every shot will be a masterpiece, though maybe not yours...



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***Smart Picture Composition* (*SPC*) analyses the scene through the camera lens and compares it to every other photo ever taken. You'll then see the total number of times this same scene has ever been captured before on the camera display. This is only an approximate figure because there might be someone taking a photo over your shoulder at that very second and the system doesn't update that fast, but it gives you a best case scenario. You can set your camera to any particular threshold, according to your personal level of artistic integrity, and the system won't waste storage space on anything less original than that.**

AUTO REPL[illegible]ENT

This doesn't mean that you can't take home a picture of the Statue of Liberty, though. It just means that you can't take home *your* picture of the Statue of Liberty. The point is that somebody else has already taken a better picture for you. *SPC* finds the best example of the scene in front of you and substitutes that instead. Of course, some of the foreground details won't be exactly the same – instead of your wife in an 'I ❤ NY' T-shirt, for example, you might find three Swedish backpackers in bikinis. This is just one of the many advantages of *SPC*.

ENFORCEMENT

For *SPC* to work, there needs to be a database of every photo ever taken, both digitally and on 35mm. All countries are required to participate in the scheme, as mandated by UN resolution 1812, and this is backed up by the threat of massive airstrikes. The database isn't centralised because cameras only take pictures of their immediate surroundings. Instead, each public location maintains its own database, which can be accessed wirelessly by *SPC* cameras. Any sites that do not keep their database up to date are bombed off the map, which simultaneously encourages site compliance whilst solving the problem of the incomplete database for that location.

FUNDIN[illegible]

The infrastructure costs of the system are met through royalty payments for each substitute picture that is sent to an *SPC* camera. For the end-user the cost is trivial (less than the cost of developing the equivalent frame using 35mm) but for countries with particularly popular views, such as the Grand Canyon or Natalie Imbruglia's belly button, the revenue can amount to a significant slice of GDP.

NEXT MONTH [illegible] The Sims 2 150 speed tips Moto GP 2 Exclusive Demo Full UK train timetable

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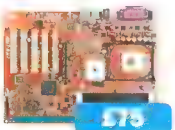
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More! see page 06 of the Install section.

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Here you'll find details of previously solved problems, updates and patches. This is the best place to start.

2. E-mail:
pcformat.autosupport@futurenet.co.uk
The team will return an answer to your query as quickly as possible.

3. Fax: 01225 732310.
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